CHARLES FORRESTER

MONTY'S FUNCTIONAL DOCTRINE

COMBINED ARMS DOCTRINE IN BRITISH 21ST ARMY GROUP IN NORTHWEST EUROPE, 1944–45

Using a combination of new perspectives and new evidence, this book presents a reinterpretation of how 21st Army Group produced a successful combined arms doctrine by late 1944 and implemented this in early 1945. Historians, professional military personnel and those interested in military history should read this book, which contributes to the radical reappraisal of Great Britain's fighting forces in the last years of the Second World War, with an exploration of the reasons why 21st Army Group was able in 1944–45 to integrate the operations of its armour and infantry.

The key to understanding how the outcome developed lies in understanding the ways in which the two processes of fighting and the creation of doctrine interrelated. This requires both a conventional focus on command and a cross-level study of Montgomery and a significant group of commanders. The issue of whether or not this integration of combat arms (a guide to operational fighting capability) had any basis in a common doctrine is an important one. Alongside this stands the new light this work throws on how such doctrine was created. A third interrelated contribution is in answering how Montgomery commanded, and whether and to what extent, doctrine was imposed or generated. Further it investigates how a group of 'effervescent' commanders interrelated, and what the impact of those inter-relationships was in the formulation of a workable doctrine.

The book makes an original contribution to the debate on Montgomery's command style in Northwest Europe and its consequences, and integrates this with tracking down and disentangling the roots of his ideas, and his role in the creation of doctrine for the British Army's final push against the Germans. In particular the author is able to do something that has defeated previous authors: to explain how doctrine was evolved and, especially who was responsible for providing the crucial first drafts, and the role Montgomery played in revising, codifying and disseminating it.

Charles James Forrester is a military historian with a PhD from the University of Leeds, UK, where he studied with Professor John Gooch, and a master's degree from the University of South Africa, Pretoria, where he studied with Professor Dion Fourie. He received his BA in European Studies from the University of Limerick, Ireland, and also went to St. Benet's Hall, at the University of Oxford, where he studied a wide range of subjects, including history. His earlier research was on operational strategy and the motorisation of the British Army before 1940. His more recent research interests focus upon Montgomery, 21st Army Group, and General E.H. Barker. As well as his MA on motorisation and his PhD on command, he is also the author of an article on Montgomery's role in the creation of the British 21st Army Group's combined arms doctrine for the final assault on Germany.

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Monty's Functional Doctrine

Combined Arms Doctrine in British 21st Army Group in Northwest Europe, 1944–45

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Front Cover: The commanders of an armoured regiment, an infantry battalion, and an artillery battery hold an impromptu conference on the top of a Churchill tank to decide what to do, during Operation 'Epsom', 28 June 1944 (photo IWM B 6113: © Imperial War Museum). Back Cover: Montgomery, Normandy, 11 June 1944 (photo IWM B 5337: © Imperial War Museum).

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1 Major-General L.O. Lyne (left) is not a well-known commander. However, his involvement in the formulation and production of Monty's functional doctrine was both important and extensive. He is seen here welcoming Foreign Secretary Anthony Eden to Berlin in 1945. The photograph is interesting as, although an infantry officer by background and training he wears the red jerboa shoulder patch of the 7th Armoured Division, which he commanded from November 1944 (photo NAM 1985-10-134-50: reproduced courtesy of the Council of the National Army Museum, London).

2 Major-General G.P.B. Roberts, GOC 11th Armoured Division; Montgomery's relationship with and regard for Roberts as a competent, 'safe pair of hands' went back to before the Battle of El Alamein. Here, photographed in 1942, they survey the battle area from the turret of a Crusader tank; its 2-pdr looks like a toy gun, when compared with the armament of British tanks later in the 1944-45 period (photo Tank Museum 6284-D1: reproduced by kind permission of the Tank Museum, Bovington, Dorset).

3 Major-General G.P.B. Roberts taken around 1945 (photo Tank Museum 4209-C5: reproduced by kind permission of the Tank Museum, Bovington, Dorset).

4 Jagdpanzer 38(t) 'Hetzer'. German Jagdpanzers were anti-tank versions of existing tank chassis. Their powerful anti-tank guns were mounted in low-profile, well-armoured, casement-style superstructures, which made them excellent for use in ambush situations. The Hetzer was armed with the powerful 75mm Pak39 L/48 gun. The photograph conveys something of the Hetzer's small size and limited height, which made it particularly difficult to spot (photo taken by the author outside the Battle

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5 Norman farmstead used to hide a Tiger. A typical Normandy farm just outside Falaise – the crops, trees, and stone buildings provided good cover for the defence, to support a prepared ambush. These buildings concealed a Tiger tank according to the previous owner who was a child there in 1944 (photo: Lynn Kilgallon). (See also Plate 4, the much-smaller, low-profile tank destroyers leant themselves to this even more.)

6 Major-General A.H.S. Adair, GOC Guards Armoured Division, salutes from his tank during the Liberation of Brussels, on 4 September 1944. The tank is a command tank version of the Cromwell. A Cromwell command tank had its 75mm gun replaced with a dummy, and two powerful radios installed in the now-empty turret (photo Tank Museum 7450-F2: reproduced by kind permission of the Tank Museum, Bovington, Dorset).

7 Brigadier R.M.P. Carver at Aschenberg, Schleswig-Holstein, on a mount (probably Marshal) supplied by a German remount depot at Neumunster, after V-E Day. Important things to note are his obvious youth and air of apparent confidence (at the age of 29, he became the army's youngest brigadier when he was given command of 4th Armoured Brigade). Also to note is the 'Black Rat' jerboa shoulder patch of 4th Armoured Brigade (photo NAM 1975-03-63-24-73: reproduced courtesy of the Council of the National Army Museum, London).

8 Lieutenant-General Sir R.N. O'Connor, GOC VIII Corps. A picture is worth a thousand words: while this interesting photograph from late in 1944 has been seen in various forms and with various different captions, for our purposes what is significant is the evident awkward body language and apparent strain on the faces of the two friends O'Connor (second from left) and Montgomery. Beneath the smiles, O'Connor's future as GOC VIII Corps is now very much in doubt in Montgomery's mind. G.L. Verney (first on right), who has also featured in our story, now commanded 7th Armoured Division (photo IWM B 10388: © Imperial War Museum, Lambeth, London).

9 Lieutenant-General E.H. Barker, who has succeeded O'Connor as GOC

VIII Corps, inspects various captured German weapons during a visit to Whistler's 3rd Division, on 26 January 1945. Interestingly, Barker (2nd from left) wears the beret of the KRRC. Although not the only one of Montgomery's generals to have a light infantry background, Barker's inspiration for, and implementation of operations Rebound and Thruster substantiated the KRRC motto, 'Celer et Audax (Swift and Bold)' as well as earlier experience he had gained while the first British armoured division was being formed (photo IWM B 14185: © Imperial War Museum, Lambeth, London).

10 Lieutenant-Colonel P.R.C. Hobart, CO 1st Royal Tank Regiment in his Comet A34 Cruiser tank 'Iron Duke'. Hobart was a highly competent officer, who went on to have an important role in the post-war army. The photograph allows us to note the Comet's effective 17-pdr (77mm) principal armament (photo Tank Museum 6284-D1: reproduced by kind permission of the Tank Museum, Bovington, Dorset).

11 Sherman Firefly (centre), closely followed by a 'standard' Sherman, during the advance into Germany in late 1944. The much longer barrel of the Firefly's 17-pdr gun and the armoured radio box on the rear of the turret made it stand out among standard Shermans. In this interesting, moving, action shot, it is clear that every effort has been made to disguise the length of the barrel. The radio box would also appear to be camouflaged with branches. (photo Tank Museum 7417-A2: reproduced by kind permission of the Tank Museum, Bovington, Dorset).

12 Churchill tanks and infantry preparing to move forward in close proximity during Operation Epsom, June 1944. The perception at the time was that it was the role of the tanks to protect the infantry (photo IWM B 6124: © Imperial War Museum, Lambeth, London).

13 Infantry protecting the tanks during the advance into Germany, February 1945 (photo IWM B 14608: © Imperial War Museum, Lambeth, London).

14 Here, we actually have tanks and infantry in a mutually supporting role in Germany towards the end of the war, as described by David Fletcher '[t]he soldiers protect the tanks from Panzerfaust operators lurking in the hedgerows while the tanks cover the infantry and deal with any

opposition that might hold them up (*British Tanks of World War II (2) Holland & Germany 1944/1945*, p. 22)' (photo IWM B 4990: © Imperial War Museum, Lambeth, London).

15 Montgomery and his Commanders, after issuing his final orders for the Rhine Crossing, 22 March 1945. What is interesting about this photograph is, whether by accident or design, Lyne and Roberts are sitting (left and right) at the feet of the "Master" (the name by which Montgomery was privately and affectionately known by those who worked for him at TAC HQ) (photo IWM HU 102819: © Imperial War Museum, Lambeth, London).

16 Diamond T tank transporter and 40-ton trailer with Comet tank. By the end of the Second World War, tank transporting was an established and essential part of the mobility of British armoured formations. The photograph epitomises the excellence of British armoured division transport and logistics in the closing months of the War (author's own photograph taken at the Museum of Army Transport, Beverley, Yorkshire).

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6 Operation THRUSTER map. Advance of Clarkeforce during Operation THRUSTER, reproducing the hand drawn detail of the original, almost certainly ascribable to General Barker.

List of Abbreviations

2/6 pdr	British 2- or 6-pounder tank/anti-tank gun
17 pdr	British 17-pounder tank/anti-tank gun firing AP/HE
25 pdr	British 25-pounder gun/Howitzer
88	German 88mm calibre tank/anti-tank gun
A/T (AT)	Anti tank
AGRA	Army Group Royal Artillery
AP	armour-piercing shot
APC	Armoured personnel carrier
Armd Div/Bde/Rgt	Armoured Division or Brigade or Regiment
Armd Recce Regt	Armoured Reconnaissance Regiment
BGS	Brigadier, General Staff
Bty	(artillery) battery
C-in-C	Commander in Chief
CLY	County of London Yeomanry
CO	commanding officer
DLI	Durham Light Infantry
DP	dual purpose (able to fire AP and HE)
FSR	Field Service Regulations
GHQ	General headquarters

GOC	General Officer Commanding
GTB	Guards' Tank Brigade
H	Hussars (retained in the title of some Armd Regts)
HE	high explosive shell
HJ	*Hitlerjugend* (also refers to the 12th SS Panzer Division 'Hitlerjugend')
Inf.	Infantry
Inf. Bn	Infantry Battalion
IT	Infantry Training Manual
KRRC	King's Royal Rifle Corps
KSLI	King's Shropshire Light Infantry
MEC	Middle East Command
MG Coy	Machine Gun Company
MGRAC	Major General, Royal Armoured Corps
Motor Bn	Motor Battalion
MTP	Military Training Pamphlet
PzKpfw	*Panzerkampfwagen*
RAC	Royal Armoured Corps
RT	radio telephone
RTR	Royal Tank Regiment
SP	Self-propelled
Tac HQ	tactical (forward) headquarters
TCV	troop carrying vehicle
Y (Yeo.)	Yeomanry (retained in the title of some Armd Regts)

List of Source Acronyms

IWM	Imperial War Museum
LA	Lincolnshire Archives
LCHMA	Liddell Hart Centre for Military Archives
NAM	National Army Museum
TMA	Tank Museum, Archive
UKNA	UK National Archives
WSRA	West Sussex Record Office

The Wolverhampton Military Studies Series
Series Editor's Preface

As series editor, it is my great pleasure to introduce the *Wolverhampton Military Studies Series* to you. Our intention is that in this series of books you will find military history that is new and innovative, and academically rigorous with a strong basis in fact and in analytical research, but also is the kind of military history that is for all readers, whatever their particular interests, or their level of interest in the subject. To paraphrase an old aphorism: a military history book is not less important just because it is popular, and it is not more scholarly just because it is dull. With every one of our publications we want to bring you the kind of military history that you will want to read simply because it is a good and well-written book, as well as bringing new light, new perspectives, and new factual evidence to its subject.

In devising the *Wolverhampton Military Studies Series*, we gave much thought to the series title: this is a *military* series. We take the view that history is everything except the things that have not happened yet, and even then a good book about the military aspects of the future would find its way into this series. We are not bound to any particular time period or cut-off date. Writing military history often divides quite sharply into eras, from the modern through the early modern to the mediaeval and ancient; and into regions or continents, with a division between western military history and the military history of other countries and cultures being particularly marked. Inevitably, we have had to start somewhere, and the first books of the series deal with British military topics and events of the twentieth century and later nineteenth century. But this series is open to any book that challenges received and accepted ideas about any aspect of military history, and does so in a way that encourages its readers to enjoy the discovery.

In the same way, this series is not limited to being about wars, or about grand strategy, or wider defence matters, or the sociology of armed forces as institutions, or civilian society and culture at war. None of these are specifically excluded, and in some cases they play an important part in the books that comprise our series. But there are already many books in existence, some of them of the highest scholarly standards, which cater to these particular approaches. The main theme of the *Wolverhampton Military Studies Series* is the military aspects of wars, the preparation for wars or their prevention, and their aftermath. This includes some books whose main theme is the technical details of how armed forces have worked, some books on wars and battles, and some books that re-examine the evidence about the existing stories, to show in a different light what everyone thought they already knew and understood.

As series editor, together with my fellow editorial board members, and our publisher Duncan Rogers of Helion, I have found that we have known immediately and almost by instinct the kind of books that fit within this series. They are very much the kind of well-written and challenging books that my students at the University of Wolverhampton would want to read. They are books which enhance knowledge, and offer new perspectives. Also, they are books for anyone with an interest in military history and events, from expert scholars to occasional readers. One of the great benefits of the study of military history is that it includes a large and often committed section of the wider population, who want to read the best military history that they can find; our aim for this series is to provide it.

Stephen Badsey
University of Wolverhampton

Author's Preface

This book proposes a new interpretation of how 21st Army Group produced a functional doctrine for armour, infantry, artillery and air power by late 1944, and implemented this in early 1945. It is based on the author's PhD at the University of Leeds, and also draws on his University of South Africa MA. An updated version of that PhD's literature review is provided for the reader as Appendix I.

This book shows that in order to understand armour-infantry unit organisation and structure in 21st Army Group in North-West Europe 1944-1945, the investigation has to begin before 1939. British doctrine, problems and thought with respect to armoured warfare developed from the late 1930s, as well as with the experiences of fighting earlier in the War – mainly in North Africa, Italy, and then in the initial days and weeks of the Normandy campaign.

However, in North-West Europe, 21st Army Group moved from a situation of doctrinal 'anarchy' to one of doctrinal uniformity. It did this under Montgomery's leadership. The doctrine of late 1944 reflected the lessons of the previous six months' fighting but projected them into 1945 as the means to overcome the problems that were then becoming evident. The book provides a close examination of how a group of 'effervescent' commanders interrelated, and what the effect of those interrelationships was in the formulation of a functional doctrine. It then ends with a series of examples of the new doctrine in action.

Thus, instead of looking at whether Montgomery imposed a doctrine from the top or whether the doctrinal situation was one of apparent anarchy, it is suggested that a more productive way is to see that what was happening as a more complex process which accommodated both. "*Monty's Functional Doctrine*" demonstrates how the process worked. Reciprocal command

relationships were reflected in the doctrine. The doctrine reflected reciprocal command in action. This supports the central interpretive proposition that the apparent problem posed by much of the historiography has obscured the central question which needs to be addressed, which is how Montgomery’s command produced a functional doctrine by late 1944.

1

The Influence of Army Structures, Motorisation, and Armoured Divisions on the British Army before 1944

1.1 Introduction: culture and norms

For three years, the Western Desert was the only active theatre of operations in which the Royal Armoured Corps (RAC) was engaged in specifically armoured operations and operations only in support of infantry, its two principal roles at the level of major warfare. Britain's failure to develop a comprehensive philosophy of war around the theory of armoured warfare – which this chapter will show had its roots in the inter-war years – was, however, counter-balanced by its traditional heavy emphasis on empiricism and pragmatism, which resulted in ongoing attempts to learn 'lessons' from the active theatre where British arms had been continuously engaged. This continued throughout the earlier years of the Second World War.

These lessons often centred on an individual commander at various (senior) levels and on informal transmission. The dissemination of tactical doctrine was, as always, primarily the responsibility of the War Office. For the guidance of its commanders, the War Office published *Field Service Regulations* (*FSR*) which was a sort of primer which summarised the principles or methods by which certain results could be attained. In practice, however, senior officers were allowed wide latitude to interpret the army's understanding of the methods of actual fighting as they saw fit. Further, training to achieve a sufficient level of fighting capability was left largely to the discretion of unit commanding officers. However, Montgomery believed in the imposition of doctrine. Nevertheless, the evidence that is presented

suggests that for a sizeable number of officers in the RAC many lessons from current experience of desert warfare against the Italians and the Germans – even after El Alamein – served merely to confirm a belief in the soundness of doctrine and methods deriving from earlier, pre-war thinking and experience. For this reason they held that these lessons must have universal application. Thus, the ideas in relation to the capacity for success in major warfare in the decade preceding the Second World War were still influential as late as 1944.

1.2 The debates on armoured warfare in the late 1930s

The immediate background to the difficulties the British experienced in integrating their combat arms in the Second World War can be found in the debates on armoured warfare in the late 1930s. Britain, the country which had invented the tank, went to war in 1939 without an effective armoured force, unlike Germany. The 1940 German campaign against France and the Low Countries would show armour capable of strategic deep penetration had been developed, although 'the victors were at first just about as surprised as the vanquished'.[1] The British Army, however, was completely motorised, that is not dependent on horse transport at all or on foot-mobility alone. Every arm of service and support was equipped with means of transport and movement utilising the internal combustion engine to provide or improve mobility.[2] This was completely unlike the German Army. The highly armoured and mechanised *Panzerwaffe*, or armoured force of the *Wehrmacht*, was only the most modern element of the German army. There were actually two armies within the *Wehrmacht*: 'on the one hand, the ten Panzer and six motorised infantry divisions, and on the other hand, the actual army that looked rather old-fashioned and had inferior equipment'.[3] The main mass of the *Wehrmacht* proceeded at the pace of the foot soldier and which still used animals to draw part of its logistics and artillery.[4] The British Army thus had important differences in comparison to the German Army which could be significant not only for tactics but also operationally, that is not only for where and when to fight but for commanders' choices of how to fight. It had a movement capability using unarmoured vehicles that gave it at least a notional capacity to compensate for its shortcomings in armour. However,

German armoured divisions were combined arms teams. Armour and infantry both worked together all the time – infantry were integral, as a result of experience gained from the breakthrough at Sedan during the 1940 campaign in the west.[5] The armoured divisions' infantry was usually equipped with a suitable panzergrenadier vehicle. Nevertheless, the operational insights and innovative tactical applications of Montgomery and Lieutenant-General R.N. O'Connor, allowed them to excel in the offensive use of motorised logistics in the beginning of the Second World War and achieve significant strategic advantages without tanks (for example: Montgomery in the defence of the Yser Canal during the Flanders campaign in 1940) or at most with limited tank support (for example, O'Connor in his Libyan campaign, 1940-41).[6]

The British infantry, however, could draw on lessons of combat experience that had been first learned from 1917-18, which were already comprehended – at least in doctrinal terms. Therefore, in order to come to a completely rounded understanding of the ideas of Montgomery and others for the combining of tanks and infantry just before the war and early to mid-war, and the problems left behind from that time, it is necessary to focus on the essentially competing demands in the 1920s and 1930s of those wishing to modernise the army – that armour be developed to become the predominant arm – and the desire of most of those in charge of the army to create a modern army with tanks in a way that ensured the continued existence and importance of the infantry arm and infantry divisions, alongside the new armoured divisions, and the many problems that this created.

1.3 Impact and implications of British motorisation and armoured divisions before 1940

Between the wars, Britain lost the earlier tank lead which it had gained in the First World War and, for various reasons, did not concentrate on developing a modern armoured force like the German *panzerwaffe*. Further, it was widely held in the British Army between the two world wars that motorisation, applied to operations at the level of small, colonial wars, could provide commanders with the capacity to execute wide lateral movements speedily. Much of its equipment emphasised characteristics of mobility over

firepower – which would be found very useful early in the Desert War because of the ability of widely dispersed columns to move over great ranges and achieve effects out of all proportion to their actual weapon power. Tanks' firepower became a subsidiary consideration to mobility, which imposed an important constraint on their effectiveness in action in the desert later on.

At the level of major warfare the future role of tanks was, however, an issue of great contention. The debate in Britain was paralleled elsewhere – particularly in Russia, France and Germany. It is possible to delineate at least five categories of attitudes towards British Army mechanisation, excluding those who simply did not think seriously about their profession. Bond includes a list of "revolutionaries"; "reformers"; "progressives"; "conservatives" and "reactionaries": those simply opposed to mechanisation. The first four of these five categories can be characterised, respectively, as: firstly, agreeing with Fuller that the tank should be the most important element, as it would dominate land warfare; secondly, those who were not as radical as Fuller and his supporters but who nonetheless supported a thorough revision of tactical doctrine (i.e. to include the tank); thirdly, those "thoughtful officers who appreciated the tactical shortcomings revealed in the First World War" but who by and large were satisfied to improve their own arm or specialisation and saw no need for major changes in doctrine of the kind proposed by the "revolutionaries"; and fourthly, those the conservatives who were not actually opposed to mechanisation but who certainly argued against independent mechanical armoured formations. Bond's fifth and final category, "reactionaries" is those who "were opposed not merely to the tank but also to the mechanisation of transport".[7]

However, a simpler, tri-part categorisation is also possible. In the period between the world wars there was an expectation among a first category, some military writers and soldiers with a desire to modernise the British Army, that armour should be developed to become the predominant arm of the Army.[8] Few of them, or of like-minded German, French or Russian counterparts, considered that there could be any satisfactory substitute for the tank and large modern armoured forces.[9] Some emphasised the need for an offensive infantry element with dedicated transport – ideally tracked and armoured – which would contribute to the armoured battle by moving into

the gaps created by the tanks to overcome and clear defended obstacles. All saw armoured forces as the primary means of achieving breakthrough and eventually success in future war on land.

Many of Britain's senior soldiers took a different view and thus fall into our second category. They were often far from antagonistic to tanks or to the permanent establishment of tank forces, however. Their view was that the proper employment of tanks did not require the development of the kind of armoured forces for which the 'modernists' hoped. Instead, they sought to improve cooperation between tanks and existing arms. What they wanted was more tanks on the battlefield at the speed of infantry brought to battle by mechanical transport. The important feature to note about this motorised transport of infantry was the virtual abandonment of any official consideration of a fighting role for infantry in motorised transport working with tanks to carry out specifically 'armoured' tasks, operating together in permanent all arms formations. Infantry was 'in-house' in armoured divisions, it was not yet integral with the armour. Infantry tanks required to be more heavily armed and armoured than other tanks. This firmed up the distinction in Britain between 'Infantry' tanks, intended for close-support of infantry, and 'cruiser' tanks, intended for traditional cavalry-type general armoured tasks. The role of motorised transport in major warfare would remain primarily the movement of men, guns, and supplies. This reflected earlier thinking and experience.

A final category of senior commander can be distinguished. These were thoughtful officers who perceived that movement utilising the internal combustion engine was significant not only for tactics but also operationally, and needed only to be understood and brought to an adequate level of efficiency, workability, and mobility. They held the tank to be only one weapon rather than the operationally decisive one under all conditions. However, these practitioners did not see motor transport simply in the logistic sense. They understood it's potential for the strategic movement of forces; including during the course of a battle in order to affect its outcome. This realisation constituted a notional alternative employment of mechanical transport, additional to its logistic uses. Montgomery and O'Connor can be placed in this latter category.

Interestingly, Montgomery was less closely involved with experimental formations of all arms in the 1920s, or the early armoured divisions in the 1930s than many other of the protagonists dealt with here. Earlier, O'Connor had been involved with the Aldershot Experimental Brigade in 1921-22. The Experimental Brigade, also known as the 5th Brigade, included infantry, tanks and artillery. Brigadier (as he then was) E.H. Barker, arguably even less well-known, will nevertheless also occupy an important place later in our story. A more junior commander in Palestine in 1938-39 than Montgomery or O'Connor, he had played a key role in the formation of the first British armoured division back in England. He became a member of the War Office Committee on Mechanical Transport (the so-called 'Finch Committee') after Dunkirk. As Montgomery explained to Barker (in classic Montgomery style and with characteristic turn of phrase) he had been appointed 'to keep Finch straight; he [Finch] is quite useless and has already been pushed out of his Division; it is very necessary that you should stand up to him, say what you think in no uncertain voice, and force it through'.[10] Compared with O'Connor's celebrated departure from command in North-West Europe, Barker experienced a promotion that was equally spectacular.

Throughout the 1920s and 1930s the British Army had been trying to assimilate the lessons of the First World War into its doctrine but also anticipate how the latest military technology might alter the conduct of war.[11] During the period between the two world wars the British Army lost the tank advantage it had had and fell behind other major powers in the development of armoured forces, and, instead, it was decided to motorise the entire British Army to include each of the traditional arms: it was desirable, therefore, that the mobility of every arm be improved through general motorisation and by a limited mechanisation.[12]

In the late 1920s the British Army had established an experimental formation of approximately brigade size and set up exercises to test procedures for the close cooperation of infantry, tanks and artillery in a wholly mechanised force, the feasibility of operations conducted at a tempo determined only by the speed of the constituent elements, and the administration of such a fast-moving force. It included tanks, two-man tankettes, armoured cars, guns drawn by artillery tractor and a machine gun

battalion carried in six-wheeled lorries, as well as motorised ancillary and support units. It lasted for just two years. Trials were discontinued in favour of allowing the rest of the Army to catch up in the application of modern methods of transport to all arms.

In 1932, the War Office Committee on the Lessons of the Great War (the so-called 'Kirke Committee') suggested that the key to the problem of converting a 'break in' into a 'break through' lay with creating a highly mobile reserve containing a powerful punch which would include 'a sufficiency of cavalry or lorry borne infantry'.[13] Towards the end of the 1930s, newly-mechanised cavalry regiments were combined with the Royal Tank Corps (RTC) battalions to form the RAC. Originally, the cavalry were to have been given a mixture of light tanks, trucks and lorries, so that some regiments could act as motorised infantry. Instead, the entire cavalry was mechanised, to carry out the traditional light cavalry roles using light tanks. Mechanisation of the cavalry, a commander of great importance for the purposes of this study, Captain the Hon. W.R.N. Hinde (as he then was) wrote, would replace the old light cavalry, which was only acceptable because 'the duties of the Divisional Cavalry Regiment remain constant, and only a modification of tactics is necessary to fit a Mechanised regiment to carry out the duties of a horsed Regiment'.[14] In 1935, for example, despite the fact that the Mobile Division of 1934 was in effect without any infantry support because the duty of the motorised infantry was close reconnaissance, he had concluded that 'examining the composition of the Mobile Division it would appear to be a well balanced force'. Further, if the infantry were not there to support the tanks, which they were not, neither was it the role of the tanks of the Mobile Division to defend the motorised infantry. That was the role of 'obstacles and A/T guns on all the approaches fr[om] which attack may be expected'.[15] All this reflected the view which was widespread within regiments such as Hinde's 15th/19th Hussars at the time that the cavalry was being mechanised for its traditional roles of long-range reconnaissance, pursuit, and economy-of-force operations. Hinde's was always essentially a light cavalry, 'armouronly' approach to tank warfare. His perspective did not change – or changed very little – between that time and 1944.

The inclusion of Motor Battalions during the formation of armoured

divisions between the wars was intended to make the armour more effective, but armoured divisions had more tanks than infantry, with the tanks and infantry organised separately. All this did not reflect a commitment to create a new ‘elite’ force with the capacity for armoured warfare, as in Germany. Instead, it was an attempt to revive the concept of the Army as a mixed force, utilizing a greater number of tanks but not necessarily employing them as its pre-eminent arm.[16]

However, many of Britain’s most senior soldiers in the War Office and the Army at this time tended to adhere to attrition as the strategy most appropriate for major warfare (where the aim was the imposition through superior force of such a loss of personnel and equipment on an enemy that he could no longer fight). Motorisation, it was held, could influence operations, tactics and logistics in the execution of attrition strategy but it did not have a strategic function or role per se. In the First World War guns had developed into new categories. An important problem with which British artillerymen had to contend, particularly on the Western Front, arose from the requirement for better mobility for larger weapons and their heavier ammunition, and more rapid deployment. It was concluded that the substitution of motor tractors for animal traction could be a solution. The infantry’s problem on the Western Front had not been the inability to penetrate enemy positions so much as inability to exploit this. It was thought that, because of the depth of the modern battlefield, physical exhaustion had played its part in bringing attacks by foot-mobile only infantry to a halt. Motorisation thus could be part of the solution.

The provision of better logistical supply to the front lines had been another significant problem on the Western Front. Although rations and stores usually had to be manhandled into the trenches, mechanical transport was employed to vastly increase the amount of supplies which could be brought forward from railheads to troops in the front line. Now, it was held, these could be moved by mechanical transport in greater quantities and at several times the speed of horse-drawn vehicles. Complete motorisation could be a solution to problems of mobility in three functional areas: the transportation of men and weapons to the battlefield, the transportation of men and weapons on the battlefield to where they would dismount before moving forward engage to

the enemy, and the transportation of supplies. The so-called dominant personalities argued that reform and reorganisation directed toward the creation of a motorised army led by tanks rather than of an armoured force was what was required. Thus, the British Army motorised to improve mobility and bring artillery and infantry into action closer to the centre of the battle to make possible the practice of combined arms tactics, and to improve logistical efficiency.

The British Army, however, did not heed those promoting the primacy of the tank and disregarded their challenge to the Army to adopt the desired doctrine and organisation while the opportunity was still within reach. Thus, there was a lack of adequate tanks in sufficient numbers in 1940. Although the first British armoured divisions of the late 1930s were heavily tank-orientated, failure to develop an adequate principal gun, reluctance to move from riveted to cast or welded construction, and failure to develop a standard engine of sufficient power, all meant that those tanks intended to engage in specifically armoured operations had significant shortcomings. However, more 'conservative' contenders, who adhered to an attrition strategy, were able to take considerably more sanguine views of developments. They could, for example, point to what the Army had done to recognise and rectify shortcomings in reaching sufficient standards of mobility for the infantry and adapting tactical techniques and operational concepts.[17]

1.4 The legacy of the application of motorisation in the Western Desert and lessons of tank warfare from North Africa

O'Connor was in command of Western Desert Force – the small British and Commonwealth force facing the Italian colony of Libya – when, in June 1940, Italy entered the Second World War. On 13th September 1940 the Italian 10th Army crossed the Egyptian frontier and advanced some sixty miles towards Sidi Barrani, then halted and built a series of fortified encampments.

After careful reconnaissance, in great secrecy, the British force moved into position on the night of 8th December 1940. The 4th Indian Division was to break through the Italian defences at Sidi Barrani and then press ahead along

the coast road; the 7th Armoured Division was to operate on the open southern flank, in a series of wideranging out-flanking movements. Taken completely by surprise, the Italians fell back in disarray, and, in a matter of days, had been expelled from Egypt.

O'Connor was determined to advance into Cyrenaica, the eastern province of Libya. On 5th January 1941 the coastal fortress of Bardia fell to O'Connor's forces; the 7th Armoured Division having deployed into the desert to block all Italian escape to the north and northwest, some 40,000 Italians were taken prisoner. Next to fall was Tobruk, the major port of eastern Libya; Italian resistance was stronger than that encountered previously, but by 22nd January the town was in British hands.

O'Connor now saw a chance to destroy the Italian 10th Army in its entirety. If he continued to advance along the coast he would certainly push the enemy out of Cyrenaica. But if instead he pushed 7th Armoured Division across the desert to the coast, ahead of the rapidly retreating Italians, he might forestall a successful Italian withdrawal to Tripolitania (the western province of Libya) and thus prevent the survival of a significant part of the Italian 10th Army.

An Australian force (6th Australian Division had replaced 4th Indian Division) harried the Italians out of Derna (which fell on 30th January), while British tanks and armoured cars, lorried infantry and guns drove across the desert, through Mechili, to Msus oasis. General M.O'M. Creagh, commanding the 7th Armoured Division, believed his force might well be too late to complete the south-eastern envelopment envisioned by O'Connor. He ordered a wheeled force – Combeforce – to race ahead of the tanks and cut the coast road south of Benghazi as soon as possible. Arriving to join Creagh at Msus, this decision was endorsed by O'Connor.

Just after midday on 5th February 1941 Combeforce reached the coast road some ten miles south of Beda Fomm. In mid-afternoon the vanguard of the first Italian column appeared and the battle of Beda Fomm began. The Italians tried to break through. They failed.

During his period as Chief Instructor at the Senior Officers School in 1940-1, Colonel L.O. Lyne (as he then was), who will soon loom large in this story, found great difficulty in keeping a 'reasonable balance in our teaching

of tactics between the impressive early German victories, the evolution of our own army for future operations in Europe and the very specialised conditions of the fighting in the Western Desert'.[18] High-level commanders could and did disagree both with each other and with the War Office on the lessons of battle in North Africa and the 'correct' way to fight with men, tanks and guns at the level of major warfare. Senior officers were allowed considerable latitude to interpret doctrine as they saw fit because it was recognised that official doctrinal publications could inevitably only present an ideal set of circumstances, which might all too infrequently be realised in combat. Lyne's description of the way in which the army as an institution attempted to adjust its doctrine to a variety of different experiences was an accurate reflection of the situation at the time. Official armour doctrine was for these reasons still in a state of flux on D-Day.

Plate 1 Major-General L.O. Lyne (left) is not a well-known commander. However, his involvement in the formulation and production of Monty's functional doctrine was both important and extensive. He is seen here welcoming Foreign Secretary Anthony Eden to Berlin in 1945. The photograph is interesting as, although an infantry officer by background and training he wears the red jerboa shoulder patch of the 7th Armoured Division, which he commanded from November 1944 (photo NAM 1985-10-134-50:

reproduced courtesy of the Council of the National Army Museum, London).

As Creagh's instructions to 7th Armoured Division show, the armoured division of 1940-42 was not intended to assault heavily defended enemy positions but to fight tank battles in manoeuvre. Creagh considered that although 'in the main, in the past, we have not been engaged in tank versus tank battles; in the future, we are bound to be. The desert lends itself to this form of attack'. Creagh's view was that 'the attack on a defended position will rarely be the objective of an armoured unit, it should be circumvented wherever possible'.[19] Reflecting this intended role, armoured divisions lacked an integral infantry element beyond the motor battalion attached to each armoured brigade. Nevertheless, adaptation proved possible, utilising this (augmented) battalion to provide the nucleus of mixed, light mobile forces.

In a situation where the enemy was in great strength, an improvisation in the form of Jock columns developed into a tactical system, ideally suited to prevailing conditions. Named after Major-General J.C. Campbell, the originator of the idea, the Jock column was a mixed force – typically a few light tanks or armoured cars, guns and lorry-borne infantry – designed and organised for mobility, surprise and combined arms action. Campbell was commander of the 7th Armoured Division's Support Group, 1941-42. His ideas and those of Lieutenant-General W. H. E Gott, successively commander of 7th Armoured Division and then XIII Corps in 1941-2, continued to have a very powerful influence even after the initial stages of the campaign in the Western Desert. After Alamein, Brigadier (as he then was) George 'Bobby' Erskine wrote, 'I don't think either he [Gott] or Jock Campbell will ever be forgotten. Those two held the field under terrible conditions for years'.[20] Erskine did not actually arrive in the desert until February 1942. In his view, in the absence of a viable armoured force, Gott and Campbell had used their guns and infantry 'to the maximum extent permitted by the circumstances'.[21] Columns had, however, insufficient supporting infantry to take and hold ground and were certainly not able to defend it against enemy tanks. Nevertheless, combining the capability of motorised infantry to move over great ranges, and the mobility and hitting power of the 25-pdr gun, when used correctly, columns 'could make

themselves a very great nuisance and give the enemy a feeling of great insecurity on his open [desert] flank'.[22] Erskine believed that 8th Army's success in 1941 despite its inferior tanks and poor anti-tank guns was entirely the result of Gott's skilful methods. 'Since we were at a disadvantage in a stand up fight we had to adopt other methods'.[23] Thus, although Erskine did not experience the 1941 desert battles first-hand he was satisfied that his conclusions, 'drawn as a result of those who had experience', both accurately reflected the challenges faced by armour and confirmed the fundamental soundness of the methods employed to meet them.

Plate 2 Major-General G.P.B. Roberts, GOC 11th Armoured Division; Montgomery's relationship with and regard for Roberts as a competent, 'safe pair of hands' went back to before the Battle of El Alamein. Here, photographed in 1942, they survey the battle area from the turret of a Crusader tank; its 2-pdr looks like a toy gun, when compared with the armament of British tanks later in the 1944-45 period (photo Tank Museum 6284-D1: reproduced by kind permission of the Tank Museum,

Bovington, Dorset).

However G.P.B. Roberts, who was Commanding Officer, 3rd Royal Tank Regiment (3rd RTR), 7th Armoured Division in the Western Desert in 1941 and went on to take temporary command of 7th Armoured Division in 1943 prior to Erskine, believed that 'having had too easy a time against the Italians and learnt some rather false lessons, one has to admit, in retrospect, that we were still feeling our way regarding armoured warfare and had not, even after Battleaxe [15-17 June, 1941], appreciated the important factors'.[24] Erskine and Roberts between them commanded two of the three standard British armoured divisions in Normandy and Roberts, unlike Erskine, was successful in both North Africa and North-West Europe. In North Africa, Roberts recognised that it was mainly the enemy anti-tank gun that was damaging and destroying British tanks; Erskine did not and thus found it difficult to conserve his tanks to engage and destroy the enemy tanks. The differing lessons drawn by these two senior operational commanders from the fighting in North Africa 1940-43 influenced their approaches both before D-Day and during the early stages of the Normandy campaign.

The methods employed to address the challenges of tank armour that was inferior in quality, tank guns inferior in performance and an infantry not confident of meeting an armoured attack without tank support because of the inferiority of their anti-tank guns involved the use of mobility, speed and surprise to attempt to destroy Rommel's armour in a decisive tank versus tank encounter (e.g. BATTLEAXE), having manoeuvred 'to force him to attack on our terms advantageous to his [i.e. disadvantageous to him]'.[25] For Erskine the principal offensive goal was to neutralise the enemy's armour and 'see it off'. This always required offensive action relying on tanks' mobility more than their firepower. This reflected previous thinking and experience. This desired outcome was not always achieved because 'there was too much respect of [i.e. for] tanks in the case of our infantry and of 88mm guns in the case of our tanks'.[26] The problem was thus one of morale and method as well as of technology. The enemy's chief tactic was to use some of his tanks as bait to lure the British tanks on to concealed anti-tank batteries, then counter-attack with tanks while using more of his tanks to find weak spots in the

British defence – generally infantry positions.[27] Erskine was able to engender a strong morale but not to solve the problem of method. As he afterwards acknowledged, ‘we should have used the infantry – with their 25 pdrs – to neutralise the 88s and not charged on them as we did only too often’.[28]

The experience of fighting the German Army in the Western Desert forced a major reappraisal of the structure of an armoured division in mid-1942. British armour was forced to seek methods of engaging the infantry protecting the enemy’s anti-tank guns. Although War Office doctrine still dictated that armour and infantry be kept separate, the number of armoured brigades in the armoured division was cut to one and an infantry brigade was added. A further British response was the development of the infantry box, protected by artillery and minefields. A ‘Brigade box’ was designed to be a more or less self-contained anti-tank barrier, around which British armour would be free to pivot or manoeuvre. In the Alam Halfa battle (31 August 1942), 133rd Brigade, 44th Infantry Division, provided the ‘pivot’ for Montgomery’s defeat of Rommel’s attempt to break through the El Alamein line. Brigadier Whistler, who temporarily commanded 133rd Brigade during this battle, described the role of pivot as follows: ‘our armour to the West and some more to the South East and us for the Boche to bump his head against’.[29] To provide 10th Armoured Division with its additional infantry 133rd Brigade was detached from 44th Infantry Division and re-equipped as lorried infantry in September 1943 – but little appears to have been done within 10th Armoured Division to understand the joint handling of infantry and armour. Before D-Day, Whistler was moved from command of 131st Brigade, the divisional lorried infantry brigade of 7th Armoured Division, in accordance with Montgomery’s policy to put a few experienced commanders in inexperienced formations. Therefore, this was less an indication of the success of new techniques than of the fact that he was a proven leader with recent battle experience. However, depriving 7th Armoured Division in this way of many experienced officers contributed to the parlous state the division found itself in at Villers-Bocage, in Normandy. Whistler proved very capable when faced with the new operating environment of North-West Europe.

We must now focus again on technology, as well as tactics because the introduction of the American M4 Sherman tank in time for the Battle of El

Alamein greatly helped to ease the problem of tank guns inferior in performance, that is the lack of a principal gun which allowed British tanks both to engage and defeat enemy tanks and anti-tank guns.[30] The 75mm dual purpose (DP) gun provided armoured divisions with enough firepower to prevail in the Western Desert in the manner envisioned by the War Office. However, it also allowed the principle that there should be separate armoured and infantry brigades to be maintained, and find its way into North-West Europe.[31] Further, in the North African desert campaign after El Alamein more infantry were found to be necessary to assist in the cracking and exploitation of delaying positions. However, as Erskine acknowledged later: 'I don't think this means that Armoured Divisions had changed their role […] I certainly always felt the Armoured B[riga]de was the predominating element while I commanded 7th Armoured Div[ision]'.[32]

Turning to Roberts, and how he saw things after the German Army had intervened in the desert war, it was, as he recognised, mainly the German anti-tank gun that was the problem. Against the less powerful German infantry anti-tank guns what was needed was a high explosive (HE) shell to defeat them by engaging the defending infantry concentrations. However, where and when the German divisions deployed a small number of 88mm guns, this tactic (HE rounds) was insufficient since no British tank could close sufficiently to be able to deliver a HE round. Thus, the 25-pdr, referred to by Erskine, became a fundamental part of the British combined arms mix for armoured warfare from mid-1941. It became apparent to Roberts, however, that 'what was required was a method of defeating the A/T gun, necessitating a greater cooperation between all arms, particularly between the tanks and the artillery, and a gun in the tank which could deal with A/T guns'.[33]

Plate 3 Major-General G.P.B. Roberts taken around 1945 (photo Tank Museum 4209-C5: reproduced by kind permission of the Tank Museum, Bovington, Dorset).

The solution was better tactical cooperation between better anti-tank guns and tanks, and a tank gun capable of firing HE as well as armoured piercing (AP) shot. In the interim, tanks should no longer lead assaults, although in Operation CRUSADER (November 1941 – January 1942), for example, at Sidi Rezegh, the newly arrived 22nd Armoured Brigade was lured into making a head-on assault against well dug-in anti-tank guns without adequate artillery and infantry support, losing a major proportion of their new cruiser tanks. In the absence of an adequate British tank and anti-tank gun, however, tanks – particularly the American M3 Grant tank – could still be effective against German tanks. It is important to note that Roberts himself never had to fight with older British equipment.[34] He was moving from a problem of technology to a problem of method. He was associated particularly with the appearance of the Grant tank which had a 75mm gun in a side sponson, capable of firing a HE shell. For a short period from early to mid-1942 the 75mm guns in the British tanks (Grants) were superior in anti-tank capability to any guns mounted in German tanks. It was only in mid-1942 that the Germans installed a long-barrelled high-velocity 50mm gun on some Panzer IIIs giving the resultant PzKpfw IIIJ the same penetration power as their 50mm towed anti-tank gun. This was followed by the appearance of the new long-barrelled high-velocity 75mm gun on the PzKpfw IVF later in 1942.

In early 1942, Roberts endeavoured to put his case ‘for a [bigger] British tank gun which would at least penetrate the front of a Panzer IV at 1000 yards’ to Lieutenant-General G. Le Q. Martel, Commander, RAC (MGRAC).[35] Martel desired changes in organisation and tactics to conform to the newer concepts of a combined arms armoured division which would lose one armoured brigade but have an infantry brigade added. His ideas did not include planning for a gun larger than a 6-pdr on any British tank. Roberts thought that Martel based his ideas largely on the action of a single battalion of infantry tanks in France in 1940, took little account of the experience and recommendations of others, and was a ‘menace’: ‘he just has no idea of a modern tank battle!’[36] Roberts envisaged British tanks in firm defensive positions able to destroy the most modern German tanks with long

range fire with little need for cooperation between British infantry and tanks.[37] His principal offensive goal was the destruction of the enemy anti-tank gun and he was prepared to employ his tanks' firepower and mobility, in conjunction with other arms, to achieve this but to use his (superior) firepower to destroy enemy tanks from static positions. This reflected lessons learned from immediate experience – and Roberts's intimate connexion with the handling of armour in the field to that time.

In late 1942, Roberts came fully to understand the vulnerability of armour against strong and well prepared defences after Rommel had retreated to a new defensive line at Mersa Brega.[38] After Alamein, in the offensive pursuit and exploitation phase, even the Sherman was vulnerable. Therefore, infantry were required to lead the assault. Roberts himself conceded that he did not have much knowledge of infantry but in his temporary command of 7th Armoured Division he now realised how important infantry was for offensive armoured tactics. At that point – effectively the end of the desert war – Roberts did not have a clear idea of how this should work out in practice but he already knew it was important.[39]

The emphasis had been on manoeuvre by armoured-only forces to destroy the enemy tank force, employing mobility, speed, and surprise. Once that was achieved there would be little role for infantry in the defeat of enemy tanks. Available firepower prevailed, and covered the need to address a flawed armour-infantry doctrine which allowed the principle of separately brigaded armour and infantry (although there was much more to it than this).

However, in the later desert war and in the Tunisian campaign the need for more infantry was felt acutely, but how this might play out in north-west France was by no means clear.

In Tunisia, Roberts recognised that with the growing availability of equipment such as the Sherman which made all the difference to tactics and capabilities, he had an opportunity of putting across his ideas, which came from his experience with both 8th Army and 1st Army. In April 1943, it seemed to Roberts that there was a good possibility of getting through the Kournine Pass on a divisional plan, but this would require much closer cooperation between armour and infantry, because 'there would be chaos if the armour alone attempted it'.[40] The problem was not now primarily one of

equipment deficit or inferiority; it was one of devising ways for all arms to operate as a tactical offensive whole and in the context of a new operating environment which offered new possibilities to the defending enemy, and where it was very difficult for armour to operate alone. What was needed was an improved way of working with the infantry.

1.5 Summing up the lessons from between the wars and early Western Desert

Investigating armour-infantry organisation and structure in 21st Army Group in the campaign in Europe and preparation for it has to begin before 1944, around 1937-38, because that is when the first armoured divisions were established and the problems began. However, to understand the inherent problems in army structures, motorisation, and armoured divisions left behind from that time, it is necessary to focus on the essentially competing demands in the 1920s and 1930s. Thus one needs to understand what those wishing to modernise the army desired, as opposed to what most of those in charge of the army wanted. One also needs to understand the problems of command, doctrine, and organisation that this created. This chapter has investigated the impact the different sets of ideas had, in terms of categories of practitioners, and their implications for the development of practice.

In retrospect, it is possible to see the views of many of Britain's senior soldiers between the world wars as ill-founded because of a failure to perceive that the army might need not only mobility but also the particular combination of mobility and offensive power associated with modern, mechanised-armoured forces, that is, combined arms mechanised forces. In the 1920s and 1930s, the army developed concepts and an organisation to fight a future major war – but not the next war. Nevertheless, the capability of the 1937-43 type of British infantry battalion to move by vehicle gave a workable capacity for tactical and strategic mobility which was to have significant operational, strategic effects in the hands of certain commanders in 1940 and into 1941.

In the light of the way the German Army fought with tanks and infantry early in the Second World War, among the most serious shortcomings of

doctrine and organisation that can be identified with respect to the early British armoured divisions until well into 1942 are inappropriate initial concepts for the tactical employment of tanks and infantry together; the imbalance between the amount of armour and the number of available infantry; and the unsuitable organisation whereby armour and infantry were organised separately. Montgomery was not someone somehow 'waiting in the wings' with a pre-thought-out 'off the shelf' correct solution for these problems when war came again. The next chapter outlines how Montgomery attempted to come to terms with the complexities of armoured warfare in the 1920s and 1930s. It presents the dilemmas which Montgomery wrestled with as he attempted to find success with armoured warfare in the Second World War, before 1944.

The limitations of development that the formation of British armoured divisions around 1937-38 left set up problems that had to be faced by people in the war. The initial development had been to motorise the infantry. The problem had been perceived as mobility. In North Africa it was still perceived to be the problem there. The solution was yet to come. In North-West Europe it would become clear that the problem was not just how to get the infantry from where they were to where they wanted to be but how to fight together. Much that is of significance happened between 1940-41 and 1943-44 that produced a coordinated doctrine in North-West Europe in 1944-45. The main piece of historical ground that is cleared in this chapter is that it is in attitudes to developments in the 1920s and 1930s and in the experiences of fighting early in the war that the roots of the underlying understandings of the main protagonists involved in this study are to be found, c. mid- to late 1944. The main idea is that, while the link between capital technological advantage (the capacities of tanks, armoured divisions) and capability in war had become axiomatic, there was uncertainty about appropriate doctrine and organisation, which were neither settled nor cohesive, while there remained an unhelpful autocratic, top-down managerial control of operations. However, as the next chapter makes more clear, because the challenge was complex, there is no sense that the solution was as simple as the problem was complex – except, as this book will show, in retrospect (from a certain point in time i.e. late 1944). What was lacking, what it is that still had to happen, is

the subject of the chapters which follow, starting with the influence of all of this on Montgomery's thinking before 1944.

1 K.-H. Frieser, with J.T. Greenwood, *The Blitzkrieg Legend: The 1940 Campaign in the West* (Annapolis: Naval Institute Press, 2005 [1996], p. 2.

2 See, for example, B. Bond, *British Military Policy between the two World Wars* (Oxford: Clarendon Press, 1980), Chapters 5 and 6: pp. 127-190. Following Liddell Hart (see fn 8), Bond emphasises the high opportunity cost of this.

3 K.-H. Frieser, *The Blitzkrieg Legend*, p. 31.

4 See R.L. DiNardo and A. Bay, 'Horse-Drawn Transport in the German Army', *Journal of Contemporary History*, 23 (1988), 129-142: '[a]lthough the army increased its number of panzer and motorised infantry divisions, it was still primarily dependent on horses […] to the tune of 4000 per week in April of 1940 (p. 130)'.

5 Frieser, *The Blitzkrieg Legend*, p. 174.

6 For a detailed examination of this subject, see C.J. Forrester, 'Great Captains and the Challenge of Second Order Technology: Operational Strategy and the Motorisation of the British Army before 1940', (unpublished master's thesis, University of South Africa, 2002) in which detailed references to sources used may be found.

7 Bond, *British Military Policy*, pp. 130-33.

8 Some of the more prominent, aside from the military commentators and theorists, (Col, later Maj.-Gen.) J.F.C. Fuller and (Captain) B.H. Liddell Hart, included the (then) middle-ranking officers, Lieut.-Col. C. Broad, Maj. P.C.S. Hobart, Col. G. Lindsay, Maj. G. leQ. Martel, and Maj. F. Pile.

9 Some important contenders for the establishment of such forces were Marshal M. Tuchachevsky, DeGaulle – then a Lieutenant Colonel, and *Oberstleutnant* (Lieutenant Colonel) H. Guderian – Russian French and German, respectively.

10 Barker MSS, Montgomery to Brig. E.H. Barker, 15 October 1940.

11 See David French, *Raising Churchill's Army, 1919 -45* (Oxford: Oxford University Press, 2000);, pp.12-30, who argues convincingly that 'it is quite erroneous to conclude that the army waited until the establishment of the Kirke committee in 1932 to learn the 'lessons' of the First World War (p. 30)', and also 'Doctrine and Organisation in the British Army, 1919-1932', *Historical Journal*, 2, (2001), 497-515, where he comments that '[i]t was with some justification that, in 1929, a former director of military operations, Sir Frederick Maurice, wrote in his semi-official textbook, *British Strategy: a study of the application of the principles of war* that 'it is we who are leading the way to the recreation of the mobile striking force' (p. 513)'. However, see *Raising Churchill's Army, 1919-45*, p. 283, where he asserts the British Army's commitment to 'autocratic, top-down managerial control'.

12 See Bond, *British Military Policy*, pp. 146-150 and 161-190 for a full background to the reasons for this, in order of priorities, and the negative effect that 'when Britain went to war in September 1939, […] she was sadly lacking in anything resembling the German Panzer division (p. 161)'. He comments elsewhere, however, that it was 'greatly to [e.g. Hore-Belisha,] the War Minister's credit that a field force of five divisions was wholly motorised (i.e. not dependent on horse transport) and ready to be sent to France soon after the outbreak of war', B. Bond, 'The Army between the Two World Wars 1918-1939', in D. Chandler and I. Beckett (eds.), *The Oxford Illustrated History of the British Army* (Oxford: Oxford University Press, 1994), p. 277. For advances made in the design and efficiency of the Army's motorised transport in the 1920s and

1930s see D.J. Sutton and J.S.M. Walker, *From Horse to Helicopter: Transporting the British Army in War and Peace 1648-1989* (London: Leo Cooper, 1989), pp. 119-132.

13 London, UK National Archives (UKNA), WO33/1297, *Report of the Committee on the Lessons of the Great War* (October 1932), p. 20.

14 Lincoln: Lincolnshire Archives (LA), 16 Elwes, 1/B/1, Capt. W.R.N. Hinde, Individual Training essay on 'The Mechanised Divisional Cavalry Regiment', 28 February 1937.

15 LA, 16 Elwes, 1/B/1, Capt. W.R.N. Hinde, Individual Training essay on 'The Mobile Division', 23 March 1935.

16 An important source guide for accounts of many participants in all these developments is: "Mechanisation of the British Army 1919-1939" (London: Department of Sound Records, Imperial War Museum (IWM), 1976-77).

17 Gen. Sir Archibald Montgomery-Massingberd, Chief of the Imperial General Staff (CIGS) from 1933 to 1936, is an example. London: Liddell Hart Centre for Military Archives (LHCMA), Montgomery-Massingbeard Papers, 159, *The Autobiography of a Gunner*, unpublished memoir, n.d., p. 53. See also R.H. Larson, *The British Army and the Theory of Armoured Warfare, 1918-1940* (London and Toronto: Associated University Press, 1984), pp. 185-86; J.P. Harris, *Men, Ideas and Tanks: British Military Thought and Armoured Forces, 1903-1939* (Manchester: Manchester University Press, 1995), p. 257. Harris, in 'The British General Staff and the Coming of War 1933-39', *Bulletin of the Institute of Historical Research*, 59 (November 1986), 196-211 makes it clear that, although 'a natural conservative', Montgomery-Massingberd 'intended to develop a mechanised field force which, fighting alongside Continental allies, could meet the Germans on equal terms (p. 199)'.

18 IWM, Lyne Papers, 71/2/4, Maj.-Gen. L.O. Lyne, unpublished autobiography, [n.d.], Ch. IV, 'The Senior Officers School 1940-41', p. 3.

19 LHCMA, Roberts Papers, North Africa 1941-1943, '7 Armoured Division Training Memorandum No 1', 13 August 1941, paras 2 and 5. Creagh was GOC from December 1939 until September 1941.

20 Barker MSS, Brig. G.W.E.J. Erskine to Brig. E.H. Barker, 26 November 1942.

21 Bovington, Tank Museum Archive (TMA), RH4 7AD: 2960-73, Lieut.-Gen. Sir G.W.E.J. Erskine to Mr J.H. Yindrich, 5 July 1952.

22 IWM, Erskine Papers, 75/134/1, 'Active Service Diary', p. 16.

23 Ibid., p.18.

24 Maj.-Gen. G.P.B. Roberts, *From the Desert to the Baltic* (London: William Kimber, 1987), p. 51. Undertaken with forces numerically superior to Rommel's, including in armour, BATTLEAXE's failure brought about significant command and organisational changes.

25 IWM, Erskine Papers, 75/134/1, 'Active Service Diary', p.18.

26 Ibid., p.19.

27 For Rommel's decision to use anti-tank guns in this way, see P. Collier, *The Second World War (4) The Mediterranean 1940-1945* (Oxford: Osprey, 2003), pp. 38-39; for Rommel's view of tanks' chief role, see B. Pitt, *The Crucible of War: vol. I: Wavell's Command* (London: Cassell, 2001 [1980]), p. 302.

28 TMA, RH4 7AD: 2960-73, Erskine to Yindrich, 5 July 1952.

29 Chichester: West Sussex Record Office (WSRO), Whistler Papers, 9/48, Brig. L.G. Whistler, personal diary, 17 Aug-13 September 1942.

30 TMA, RH4 7AD: 2960-73, Erskine to Yindrich, 5 July 1952.

31 IWM, Erskine Papers, 75/134/3, '7 Armd Div Op Order No 6', 23 July 1944.

32 TMA, RH4 7AD: 2960-73, Erskine to Yindrich, 5 July 1952. This quote is interpreted to refer to Erskine's entire period in command, i.e. up to August 1944.

33 Roberts, *Desert to Baltic*, p. 51.
34 Ibid., p. 87.
35 Ibid., pp. 108-9.
36 LHCMA, Roberts Papers, Letters Home 1940-1944, Brig. G.P.B. Roberts to his father, 29 January 1943.
37 Roberts, *Desert to Baltic*, p. 65.
38 Ibid., p. 117.
39 Ibid., pp. 127 and 129.
40 Ibid., p. 144.

2

The Interaction between Army Structures, Motorisation, and Armoured Divisions, and Montgomery's thinking before 1944

2. 1 Montgomery – his developing mind in the 1920s and 1930s

Montgomery, it has been suggested, was encouraged by the inadequacy of the Staff College, Camberley, where he was a student from 1920 to 1921, to see his potential as a teacher and trainer to the British Army.[1] What Montgomery was concerned with in the 1920s and 1930s has to be looked at in the wider context of the British Army trying to assimilate the lessons of the First World War into its doctrine but also to anticipate how the latest military technology might alter the conduct of war. However, others who feature in this book and who obtained the coveted psc certificate between the two world wars (denoting that an officer had attended the Staff College) were very positive about the quality of the professional training which they received.[2]

Montgomery, it has been said, had by the mid-1920s a clear idea of the sort of army Britain should have.[3] Nonetheless, the future role, equipment and organisation of tank forces was, as has been, seen an issue of great contention. The categorisation of groups that can be distinguished in terms of their attitudes to or views on this major issue faced by the British Army in the 1920s and 1930s provides the background, or context for Montgomery's writings and what others were writing. Earlier, it was suggested that the portrayal of most soldiers in the War Office and on the General Staff as members of a category that may be termed 'conservatives' who were opposed to tanks and anti the establishment of tank forces is incorrect. The labelling of this group and their categorisation as being opposed to the establishment of

tank forces is largely a creation of the military commentator, historian, theorist, and writer B.H. Liddell Hart. If there was a lack of adequate tanks in sufficient numbers, and an unhelpful bifurcation in armoured doctrine when the British Army went to war again in 1939, far from turning its back on new military technologies, in the 1920s and 1930s the General Staff developed the idea of a small, professional, completely motorised army with many tanks. It is important to see where Montgomery stood in relation to all of this and to what extent he can be seen as typical of a group of officers. Montgomery's growing authorship, widening correspondence with other military thinkers, and enthusiastic acceptance of a Staff College instructorship have been pointed to as evidence that, from at least the mid-1920s, he was increasingly anxious to study the past to draw lessons for the future.[4] This suggests that a helpful start for an investigation of Montgomery's developing mind in the 1920s and 1930s can be made by identifying the nature of the issues in his writings of those years. Montgomery's military writings of the inter-war period – published and unpublished – make it possible to identify his most important ideas of these years in order to come to valid conclusions with respect to his developing mind in the 1920s and 1930s.[5]

Montgomery's first major piece of writing – a five-part series of articles which appeared in the *Antelope* between January 1925 and January 1926 – addressed the subject of the growth of modern infantry tactics. At the very outset, Montgomery made clear his now abiding conviction that, to be successful in battle you must be superior at the point where you intend to strike the decisive blow and it has been stated that: 'no clearer or more concise statement of Montgomery's primary tactical belief would ever be made'.[6] This is important; but hardly surprising. Nevertheless, an apparently questioning stance over the development of tank warfare in Montgomery's thinking in the last of the articles on tactics for the *Antelope* can serve as a point of departure from which to expound both Montgomery's tactical and organisational thoughts about tanks at this time. While it has been argued that Montgomery:

> congratulated Liddell Hart on his 'Model Army' article, he did not really agree with Hart's emphasis on armour. In the end, he felt, all wars become a confrontation between infantry – and the training of this infantry, its ability to move with cohesion, and to co-operate with

artillery, tanks, engineers and aircraft, would determine the outcome.[7]

This is important, because of Liddell Hart's critique of Montgomery's approach to tactics – based on Montgomery's omission of exploitation in attack – and 'diagnosed' by Liddell Hart as early as 1924.[8] Taking issue with the interpretation that Montgomery did not really agree with Liddell Hart's emphasis on armour, it is argued here that what Montgomery did not agree with was Liddell Hart's theory of armoured warfare; in essence, the idea of the deep thrust as an alternative to the strategy of attrition, based around the capabilities of an army in which armour was the principal arm, and utilizing the offensive capabilities of the tank coupled with surprise and unorthodox action to produce a decision. Montgomery addressed the issue of the army's reorganisation further in an outline sketch of the subject of some problems of motorisation and mechanisation, or 'mechanicalisation' as it was called then, at the end of 1926. Again writing in the *Antelope*, Montgomery argued that modern conditions demanded increased mobility, and this should be motor mobility – the horse should be abolished from war. Thus, infantry should be provided with motor transport, which, providing mobility, would facilitate the concentration of superior force at the right time and place. The power of the modern defence, however, would require the generation of firepower sufficient to allow the attacking infantry to gain ground. This, Montgomery concluded, required effective artillery-tank-infantry cooperation: 'additional mechanical support is […] necessary. […] In modern war organised resistance can only be overcome by mechanical means, i.e., tanks, great weight of artillery, etc.'[9]

Where Montgomery differed from Liddell Hart is that Montgomery's strategic philosophy emphasised the mobility of modern warfare and the strategic philosophy of the concentrated thrust, as opposed to Liddell Hart's emphasis on mobility and concept of the deep thrust, which would always (according to the Liddell Hart theory) produce, or result in an armoured exploitation. Montgomery was always more concerned to outfight an enemy than to outmanoeuvre him. Montgomery did become converted to the idea of specialised armoured spearheads, but this was not to Liddell Hart's idea of tank-only armoured spearheads, in a first echelon of heavy tanks, as outlined

in his ‘New Model Army’ article of 1924.[10] By the end of the Second World War, Montgomery’s tanks would be the spearhead of armoured formations that comprised tanks and infantry. Between the two world wars, however, Montgomery did not agree with the notion that armour should be developed to become the predominant arm of the army. The tank, he felt, was only one – but a very important – weapon.

With his invitation in 1929 to revise the *Infantry Training Manual, Volume II* (*IT II*) Montgomery at last got the chance to revise the pamphlets, booklets and lectures he had given since the War of Independence in Ireland in a new form that would, if well done, become official army doctrine for the next five years at least.[11] The ‘17th Infantry Brigade Summary of Important Instructions’ and the 49th (Territorial Army) Division ‘Tactical Notes’ and Training Lectures of 1923 and 1924 are important, therefore, because of the facet of military service for which, in the inter-war years, Montgomery was to become increasingly well known in army circles: training.[12] They are also important because of Liddell Hart’s critique of Montgomery’s approach to tactics – based on Montgomery’s omission of ‘Exploitation’ following a breakthrough by an all arms force based around tanks. In Montgomery’s revision of the army’s manual on infantry training, which was published in 1931, he acknowledged that there would be cases where tanks, rather than infantry, would be used as the primary arm of assault to break through static defences. This view would, however, appear to be very different from, for example, the Liddell Hart one of an armoured breakthrough followed up and supported by infantry.

It was as a particularly good trainer of troops that Montgomery increasingly impressed his superiors.[13] There were, of course, various existing army training manuals and *FSR*s in print (*FSR* was revised in 1924, 1929 and 1935); but, it has been suggested, Montgomery recognised the fundamental failing of such volumes: they laid down the principles of warfare, but did not give methods by which commanders could train their units to achieve these principles.[14] This is being over favourable to Montgomery. It is hard to find evidence that *FSR* were supposed to do this.[15] Thus, one can legitimately ask if Montgomery really identified a gap – or was he claiming one to advance himself and his own ideas? There definitely were

new training methods introduced and attempts began to co-ordinate and standardise training from 1917. The evidence appears to suggest that as late as 1937-38, Montgomery in his instructions for individual training issued as commander of the 9th Infantry Brigade did not propose to lay down detailed instructions as to how his subordinate commanders should train their battalions 'since the needs of battalions vary and what suits one battalion does not always suit another' – though '[w]ith a view to studying some of the many problems involved the Brigade Commander will conduct a study week for officers' – and he hoped it would be possible to arrive at a definite doctrine which would serve as a basis for further instruction within battalions.[16] Secondly, setting up Liddell Hart's theory of exploitation as the standard by which Montgomery's revision of *IT II* should be judged is not helpful. In fact, the British Army – and Montgomery reflects this – distinguished clearly between consolidation and exploitation – a subsequent action, which might or might not be decided on unless troops and firepower were available for this task. Further, as will be explained in subsequent chapters, the British view – which continued throughout the Normandy fighting in 1944 although Montgomery became a convert to the idea that there should be a single 'general purpose' or 'battle tank' – was that the role of armour consisted of two alternatives, infantry-support and exploitation, each requiring a different sort of tank.

Montgomery, it has been held, simply did not agree that modern battle would ever revert to the trench warfare of 1914-18; it was, however, largely axiomatic in the British army of the 1920s and 1930s that it should not – the development of means of movement utilising the internal combustion engine had increased the basic speed of warfare. Montgomery believed that the challenge of modern weapons, mobile tactics, combined arms action, and effective command in modern, fast-moving war meant that it was necessary to study the problem of the mobile encounter battle, because: 'owing to the immense power of modern weapons and to the mobility of armoured units, recovery from a bad initial start is very difficult. It may be possible to recover, but against a good enemy, it will only be with heavy losses. It is for this reason that a good enemy is so difficult to fight--he makes you pay very dearly for mistakes'.[17] Operational and tactical doctrine had to take account

of this: ‘therefore a commander must decide *before* contact is gained how he will fight the battle – only then will he force his will on the enemy’. The importance of a definite, ‘proper plan from the very beginning’ was stressed.[18] Montgomery did not agree with senior officers’ conviction that battles could always be reduced to a set of discrete phases – therefore his insistence on fighting to a ‘proper’ (i.e. appropriate) plan. Here we can see the expanding roots of Montgomery’s emphasis on a ‘master plan’ in which as little as possible was left to chance.

For Liddell Hart the new concept of war and the revival of the art of generalship were both essential for success. The causes of military conservatism were the failure to study military problems scientifically and an emphasis on technique rather than art.[19] Montgomery argued that ‘we have adopted a material solution in the hopes that it will solve for us the problems of the battlefield; but it will not do so unaided. We must also overhaul our tactics – the tactical and material solutions must go hand in hand – we must in fact develop a new technique’.[20] Thus, while warfare involving armour is a struggle for competitive advantage mentally as well as materially it was ‘do-able’ by all officers having ‘a good knowledge of the technique of staging the many and varied operations that their unit may be called on to undertake in war’.[21] In this we can see the root of Montgomery’s actions in producing pamphlets while the action was unfolding through the Low Countries and into Germany. Further, because of these beliefs, Montgomery never regarded armoured forces as a special elite. Furthermore, therefore, technological superiority or inferiority alone do not make the outcome of war inevitable. However, Montgomery thought at this time that ‘in thinking out the problem it must be remembered that a wholly mechanised unit or sub-unit is easily held up by obstacles covered by A.T. weapons, and that in order to defeat these tactics it will be necessary to have immediately available *sub-units that can operate on foot across country, using covered approaches and outflanking the resistance*’.[22]

By the late 1930s, a concentration on planning and the commander’s forward presence to an extent commensurate with his responsibility for controlling the battle as a whole had become the core of Montgomery’s military thinking. He must be prepared to command his mobile, armoured

forces himself rather than leaving it to a specialised cavalry commander.[23] Effective operational command, that is the commander's responsibility for controlling the battle as a whole, demanded senior commanders' forward presence at critical periods, when important decisions might be required. This would ensure the most effective use of information on such things as the enemy's whereabouts, capabilities and intentions and on any vulnerability to flanking and surprise movements. He must take with him the necessary means to exercise command. British military motorisation, together with improvements in radio and wireless would, in the Second World War, make it possible for the commander to be able to leave his headquarters and move rapidly around his command, visiting subordinate commanders to make operational decisions immediately and personally, while remaining in contact with his staff and his subordinate commanders of the various service and support arms. This of course was not always a good thing. One has the sense that commanders on both sides swanned hither and thither in the Western Desert, 1941-42, often damagingly. The importance of all this is that, from 1942, Montgomery would seek to make this the basis of his system for controlling formations under his command. Montgomery's 'Encounter Battle' article did arouse some controversy and the following year, 1938, he would be asked to reply, in the *Army Quarterly*, to the most important criticisms made of it, but in the article Montgomery did not manage to resolve the problem of the need for suitable commanders capable of handling armour.

'It is important to counter any tendency to regard gas as an abnormal feature of war', Montgomery wrote that same year in his 9th Infantry Brigade Individual Training Instructions. He had written in 1926 that gas would drive the horse from the battlefield. In 1938 he believed he had demonstrated that an effective defence was possible: soldiers could withstand a gas attack – and go on fighting. The main body of Montgomery's Gas Trials Report, of September1938, was a thirty-nine page answer to a detailed War Office questionnaire. But, in a seven-page introduction, Montgomery set out the problem, disposed of the anxiety surrounding the threat, and set forth the defensive and protective measures required to meet it. The 'Report on Gas Trials' shows that Montgomery was open to the use of 'new' weapons such

as gas and tanks. More importantly, and in parallel with his approach to other technical developments, it shows his emphasis on a thoughtful approach over 'the tendency […] to endeavour to provide a definite answer to every problem that can arise; this tendency, if proceeded with, would merely provide a rigid doctrine which would break down in war'.[24]

Montgomery's prescriptions – the proper responses, as he envisaged them, to the challenge of modern weapons, mobile tactics, combined arms action, and effective command in modern fast-moving war – need to be looked at in the wider context of the British Army's attempt to predict how the latest technology and weapons might alter the conduct of future war. The British Army was now wholly motorised. It was necessary, Montgomery wrote at this time, to be 'thoroughly conversant with the handling of the re-organised infantry units and sub-units'.[25] It has been said that, by 1925, when Montgomery's first major piece of writing appeared, ten years of staff duties and study had given him a clear idea of the sort of army Britain should have: in the end, he felt, all wars become a confrontation between infantry – and the training of this infantry, its ability to move with cohesion, and to cooperate with artillery, tanks, engineers and aircraft, would determine the outcome. By the mid-1930s, it has been suggested, Montgomery's tactical concept of war had fully matured: 'not spectacular for its novel ideas, but for its unity of conception and the absolute clarity with which Bernard put over this vision'.[26]

There are issues of substance here about what Montgomery was saying and believed. Some writers, pre-eminently Hamilton, have judged Montgomery by the two artificial yardsticks of Liddell Hart's formula for the 'correct' use of tanks, and his portrayal of most of the senior officer corps as anti-mechanisation 'donkeys.' A new perspective on Montgomery shown here puts him in a different light. Montgomery was not, in fact, coming from, or a contender in this armoured warfare debate and whereas Hamilton accepts Liddell Hart as the standard by which Montgomery is to be judged this book places Montgomery in the context of British operational and tactical doctrine, his fellow officers, both armoured and infantry, and the challenge of the latest military technology. This section has shown Montgomery to be a thoroughly professional, progressive soldier, undoubtedly – but of great importance

precisely because he did not allow himself to be marginalised to a position of commentating from outside the army or from the sidelines of its mainstream development. Montgomery's thoughts and actions can fairly be held to have been inextricably bound up with reversing the army's fortunes in the Second World War. However, much about armoured warfare was new to him; it would take some years, working things out, before he arrived at his 'winning formula' of dynamic leadership, plus straight thinking.

2.2 Montgomery's early war experiences

Montgomery established his reputation as a field commander during the British Army's Flanders campaign of 1940, when as GOC 3rd Infantry Division, II Corps, British Expeditionary Force (B.E.F.) he excelled in the offensive use of motorised logistics and achieved significant strategic advantages without tanks, in the defence of the Yser canal. On 10 May 1940, Germany launched its offensive in the West; the B.E.F. advanced into Belgium; and battle was joined. German armour, achieving the strategic deep penetration of the Allied centre envisioned in the 'Sichelschnitt' plan, placed the B.E.F., now retreating on Dunkirk, in a dangerous position when, having reached the French coast at Abbeville, the Germans turned to seize the Channel Ports to the Allies' rear. On the 27th the Belgians' decision to lay down their arms made this situation one of deadly peril. But, at short notice, Montgomery, in a night move by mechanical transport was able to re-position his division and establish an eastern defensive flank for the B.E.F.. He was able to take advantage of what he had. This pointed in the direction of his functional doctrine. Montgomery's manoeuvre on the night of 27th May – he had trained his division for just such a manoeuvre because his professionalism had led him to expect disaster – helped a large part of the B.E.F. to escape encirclement and to get to Dunkirk in sufficient time to be evacuated. However, he also utilised motorisation in a different but related way: effective operational command demanded senior commanders' forward presence. This was an important part of the process that led to him thinking differently, and for him to start a process which broke the pervasive mould which we saw in the previous chapter. Further, as a policy, or line of

development, progressive motorisation, together with the improvements in radio and wireless, even though it was successful in the hands of a commander such as Montgomery, had a tension behind it, which touched on the aspect of command and control, for the commander made operational decisions immediately and personally. Personal command and proper command and control were, to some extent, set against each other. Thus, Montgomery had the technical ability to do things differently but there was also a need to think differently, as well shall see in this chapter and the subsequent chapters on North-West Europe itself.

2.3 The threads of experience before El Alamein

Both Montgomery and O'Connor were effective and skilful and their contrasting employment of the troop-carrying capacity of mainly unarmoured vehicles was to achieve strategic advantages. It will be noted here, however, that both also utilised motorisation in a different but related way: to substantiate their understanding of the principles which must underlie effective command under modern conditions, and of the practices by which it should be managed, that is control. Montgomery and O'Connor – along with Barker – can be taken as illustrative of the third of the tri-part categorisation of British inter-war years commanders which was presented for the purposes of this book in Chapter 1. Montgomery's, O'Connor's and Barker's early military experiences were clearly important for the development of the leadership strengths, particularly the command and operational skills and insights which they would demonstrate later. Barker later said:

> I was always round the line. I mean I always have been even as a Divisional Commander. I was always round the line. If you see your chaps you know what they are doing. Not like the early days of the First World War when we were, I never saw my Brigadier in the trenches. I never saw my Divisional Commander ever and in those days one did not go round and see the troops.[27]

One point upon which Montgomery and O'Connor were agreed was that the absence of senior commanders' forward presence had negatively affected the Army's efficiency in the First World War by producing military situations in which command and control had tended to become separated. However elaborate their information-gathering means, it had been difficult for senior

commanders to grasp where the opportunity for outcome lay. Junior commanders had been compelled to repeatedly order their men to undertake frontal assaults against prepared defensive positions and as O'Connor discovered at first-hand during the Passchendaele campaign of 1917, heavy losses were often a result. Such experiences led O'Connor, like Montgomery, to emphasise the importance of training, not only for efficiency but for minimizing casualties. Senior commanders' forward presence would ensure the most effective use of information on such things as the enemy's whereabouts, capabilities and intentions and on any vulnerability of the enemy to flanking and surprise movements. In the Second World War both made their own forward presence whenever possible a cornerstone for their conduct of operations. However, this was completely contrary to what *FSR* stated for higher commanders.[28]

It is again useful to compare Montgomery with O'Connor during the early period of the war. It has been widely accepted that the British Army's defeat in North-West Europe in the summer of 1940 at the hands of the German Army was not offset by its victories over the Italian Army in the winter of 1940-41. The reasons for the British Army's inability to counter the organisation and techniques of the German armed forces in 1940 have been said by Liddell Hart and by those historians who follow his lead, to include the conservatism and resultant inability of the higher echelons of British Army command between the two world wars to fully comprehend the scope and meaning of armoured warfare and the failure to adopt an appropriate doctrine and organisation while the opportunity was still within reach.[29]

However, the Army's victories over the Italians are held to embody 'a record in armoured mobility that has never been equalled'.[30] In view of O'Connor's high profile departure from command of VIII Corps in Montgomery's 21st Army Group in late 1944, it is relevant to investigate the extent to which their careers, experiences and ideas overlapped earlier and at the start of the war. Montgomery's and O'Connor's initiative and thoughtful use of the mobility at their disposal contributed in one case to the deliverance of significant British forces from destruction at the hands of a German Army with a superior, modern tank force and in the other to the destruction of a larger and well-equipped Italian force.

Montgomery's and O'Connor's methods were rooted in the experience of the British Army, expressed in *FSR*, except, arguably, with respect to risk. O'Connor first used a forward command, control, communications, and intelligence (C3I) system in a basic form in the Western Desert. Between 1942 and 1945, Montgomery would make this the basis of his system for controlling ever-larger, fully modernised, mechanised and armoured formations, eventually splitting his headquarters into three parts, Tactical, Main and Rear, and placing himself at the small and mobile 'Tac HQ' well forward in the battle area. One of the roughly thirty to forty vehicles which might make up Tac HQ at any one time was Montgomery's office caravan. However, O'Connor's insistence on commanding from near the front line eventually resulted in his capture on 6/7 April 1941 when his car ran into a German patrol.

At the beginning of the war Montgomery and O'Connor still held the view that the consolidation of British military motorisation, together with the improvements in radio and wireless, could be utilised for the purpose of maintaining close personal contact with their subordinates and reintegrating command with control.[31] The availability of command vehicles with good communications and suitably powered staff cars, they understood, made it possible for the commander to be able to leave his headquarters and move rapidly around his command, visiting his subordinate commanders to make operational decisions immediately and personally, while in theory remaining in contact with his staff.[32] Montgomery's own often retrospective view however, was that application of his own rule of remaining 'balanced' always allowed him the flexibility to cope with risk. The test of operations in 1940 and 1941 showed that Montgomery and O'Connor were effective leaders and skilful commanders, who understood the capability for manoeuvre provided by the motorisation of the British Army before 1940. O'Connor's Operation COMPASS was to be a large-scale raid but O'Connor's planning could allow for the possibility of exploitation. His plan was to surprise the Italians by passing through a gap identified in their defensive line and take the enemy camps in detail from the rear. COMPASS was the blueprint for his last North-West Europe operation as GOC VIII Corps, by which time Montgomery's high command would not allow him to take such risk.

An important feature of both Montgomery's and O'Connor's earlier operations was the contrasting employment of motorised transport to achieve significant strategic advantages even without tanks or at most with limited tank support. In both of these instances, motorisation gave the British Army the capacity to offset the shortcomings in armour, doctrine and organisation which it had at the beginning of the Second World War. Although Montgomery and O'Connor were dedicated to being true professionals in spirit as well as in name, they were nevertheless able to understand the need for avoiding simple adherence to prescribed military practice in favour of a more thoughtful approach. They accordingly grew to be modernising, progressive commanders whose imaginative approaches early in the war enabled them to respond to the disadvantages imposed upon the British Army by the lack of a modern really suitable armoured force.

They were able to take advantage of what they had and to adapt it away from stereotyped concepts of logistical or tactical employment which they replaced with beneficial operational and strategic utilisation. However, the effects of employing fighting methods influenced by the apparent 'lessons' of O'Connor's victory over the Italians became more and more pernicious later in the Desert War. Although Montgomery eventually changed these methods, they influenced the formulation of fighting methods and doctrine in Middle East Command (MEC) in significant ways up to the middle of the war. A simplified version of the MEC argument runs as follows. The Cyrenaica campaign showed that 'an army should be primarily designed for mobile armoured action'.[33] What emerges is that, while new armoured weapons were important so were insight, imagination, initiative, originality, and dynamic leadership, for it still requires thought to apply advanced equipment and weaponry, or when an army is faced with difficult or new problems of fighting – a lesson that the British Army had to learn after Dunkirk and the early desert victory at Beda Fomm. This was something the importance of which Montgomery was arguing as early as the 1920s and 1930s, before the army was fully modernised, armoured and mechanised.

2.4 Montgomery, the inexperienced practitioner of armoured warfare

Montgomery arrived in the Middle East in mid-1942 with the conviction that what was required was ‘an armoured Corps; it must never hold static fronts; it would be the spearhead of all our offensives’. By the time of the drive for Tripoli in early 1943 he considered that ‘there must be only one type of Corps, and it must be able to handle armoured formations, un-armoured formations, or any combination of the two types. There is no such thing as an Armoured Corps’.[34] Between 1940-41 and his appointment as Commander, 21st Army Group in 1943, Montgomery continued developing his own ideas on armoured warfare. They changed from what they had been previously and then changed again. Most importantly for the purposes of understanding the argument of this book, they at first included no clear idea of uniformity of armour-infantry doctrine: armour and infantry had different tasks to perform on the battlefield. Quite naturally, El Alamein was his template for the successful offensive battle. It began in a highly traditional way with infantry attacks supported by artillery. The need for armour to remain ‘free to choose its own battlefield’, a point pertaining to the general conduct of battle operations, supports the argument that he was still finding his way with armoured warfare, that is that the tanks could and should be freed from the need to defend the infantry. In Montgomery’s view at this time, ‘a really heavy concentration of artillery fire, put down on a carefully thought out plan, will so neutralise the enemy that infantry *unsupported by armour* will be able to gain their objectives without difficulty, provided formidable wire obstacles do not exist’.[35] While infantry were not always necessary to defend tanks: ‘armoured divisions will always be hampered in battle by enemy anti-tank guns […] artillery fire will be a great aid in overcoming such opposition. […] ; such fire will neutralise the enemy detachments, while the tanks, *either alone or in co-operation with infantry*, manoeuvre so as to destroy the detachments with M.G. fire prior to and whilst closing with the anti-tank guns’.[36] When it came to the tactics of the offensive battle, thus, ‘armoured divisions should not be used for the “break-in” battle; they should be launched for the “break-through”’; in the ‘Dog-fight’ after the ‘break-in’, ‘operations will take the form of a hard and very bloody killing match, in which you aim to reduce the enemy’s strength [through alternating thrusts] to a state which so cripples him that a final blow will cause the complete

disintegration of the whole enemy army'. Success would come from 'two or three infantry brigades [which] should always be in reserve available for such action'. Then, 'when it becomes clear that the time for the "break-through" is approaching, armoured and mobile troops must be in reserve ready to be launched into the enemy rear areas. The final blow is then put in on an axis which is likely to give good results and where opposition is expected to be weak. The penetration thus made must be rapidly developed and the armoured forces launched; these armoured forces must be prepared to fight their way forward into open country, should the infantry attack not open the way completely'.[37]

More than problems of doctrine, or organisation, however, Alamein confronted him with a problem that is not so much one of leadership as it was of command, and command-and-control. Montgomery's diary notes for the opening of the Battle of El Alamein, 23-24 October 1942 open up the core of this problem:

> I gained the impression during the morning that the Armoured Divisions were pursuing a policy of inactivity; they required galvanising into action, and wanted determined leadership. There was not that eagerness to break out into the open on the part of Commanders; there was a fear of casualties; every gun was reported as an 88 mm.
>
> I was beginning to be disappointed somewhat in LUMSDEN [Commander, X Corps, Montgomery's corps de chasse], BRIGGS (1 Armd Div) and FISHER (2 Armd Bde), and also in GATEHOUSE [10th Armoured Division].
>
> But the main lack of offensive eagerness was in the North; both 9 Aus Div and 51 Div were quite clear that I Armd Div could have got out without difficulty in the morning.
>
> LUMSDEN was not displaying that drive and determination that is so necessary when things begin to go wrong; there was a general lack of offensive eagerness in 10 Corps.[38]

Lumsden and his armoured commanders disagreed with Montgomery's ideas for the use of armour. Montgomery's original plan envisaged the armour of Lumsden's X Corps helping to open up a corridor through the German defences by night. The armoured commanders were markedly reluctant, concerned that if the mines could not be lifted in time, their tanks would be caught in daylight hemmed in by mines and easily destroyed by enemy anti-tank guns before they could get forward to ground where they could bring on a battle with the enemy tanks. This opposition swayed Montgomery into changing his intentions and fixing on a plan which would rely on simultaneous attacks by infantry to help clear routes through which

the armour could advance. However, when daylight came on 24 October, neither 1st nor 10th Armoured Divisions, etc. were in a position to exploit. Montgomery continued to urge his armoured commanders to get their divisions through the minefields, but little attempt was made to comply and Lumsden did little to bring pressure on them to act in accordance with Montgomery's commands. Lumsden's was outspoken in his disagreement with Montgomery's plans to use armoured divisions to break through frontally, to which it can be added that 'Lumsden of course was a completely different character: extrovert, coloured scarf, cavalryman, fly-whisk – Monty's bête-noir, that sort of chap'.[39]

As Montgomery noted in the Conclusion to his diary notes on 'The Battle of Egypt 23 October-7 November 1942' 'the training of Commanders by their superiors was unknown; there was no firm doctrine of war on which to base training'.[40] Montgomery could recognise – perhaps because of the authoritarian streak in his own personality – that there was a requirement to shape everybody according to the same mental recipe. But, he also recognised, a lot of the time people were not taking any notice of his ideas and not doing things in the way he wanted. This recognition was what was behind his first foray into pamphlet literature intended for very senior officers in the 8th Army. As he explained to Brooke: 'there is much to be learned from these two battles [the defensive battle of Alam Halfa and his offensive battle, El Alamein], and together I think they provide the material for a very short and quite small pamphlet on the "Conduct of Battle". This might be given to all Generals, and perhaps Brigadiers, and would be a good doctrine for the whole Army'.[41]

However, the process of teaching his commanders 'how we will fight our battles, and therefore how we must adjust our training' was not actually as straightforward as he initially thought it would be.[42] At high level in the British Army, what official policy was tended to depend on who was doing the perceiving and from what perspective, and senior officers were allowed wide latitude to interpret doctrine as they saw fit. Montgomery recognised as much in his second pamphlet for senior officers: 'I do not expect for a moment that all senior commanders will agree with what I say'.[43] Further, as we have already seen, a military 'culture' existed which left inculcation of the

Army's, army commander's, or higher commander's understanding of the methods of actual fighting and training largely to the discretion of unit commanding officers. So, Montgomery, by 1943, was half-way there as a good teacher and trainer because he had the conception of the need for it, and a method: 'in the Eighth Army I concentrate on the Generals. If they know their stuff, they will teach the soldiers'.[44] However, finding ways to get people to buy into his conception was equally important. Montgomery seems to have had some difficulty doing that. Individuals can be representative of – and embody – experience, as well as formations, units and organisations. Many of Montgomery's senior armour commanders had a very different past experience from Montgomery's own, not only because they were tank men in background but also because the experience of some stretched back to the early fighting under O'Connor. Hence the two pamphlets Montgomery wrote in North Africa. The fact that the second is so much shorter than the first – a mere nine pages – probably represents a definite attempt by Montgomery to give commanders a greater incentive to read it.

2.5 Summing up Monty's early years: what he thought, and what he lacked in know-how before Normandy

Montgomery's military experiences earlier in the Second World War were also clearly important for the development of the leadership strengths, particularly the command and operational skills and insights which he would demonstrate later. All this underlines the usefulness of seeking a holistic explanation of Montgomery's functional doctrine, a theme which has emerged in the course of the research for this book. One also needs to understand the problems of command, doctrine, and organisation that had been created. This chapter and the previous one have investigated the impact the different sets of ideas had, in terms of categories of practitioners in Chapter 1, their implications for the development of practice, and the interaction between all of this and Montgomery's thinking before 1944 as outlined in this chapter.

For Montgomery, as an army, then army group commander, finding really suitable subordinates was a challenge that would take some time to

overcome.

He needed commanders who were not only content, or functional specialists having an armour background, but who saw completely eye-to-eye with him on the handling of armour, and who also possessed the necessary forceful decisive leadership.

It took Montgomery some time to realise what was going wrong. He was not really closely involved with tank developments in the inter-war period or with directing armour in the battle for France in 1940. What one is looking at is, therefore, an ‘uneducated’ mind, arriving at the problem in 1942 inexperienced in armoured warfare. Montgomery was half-way there as a practitioner of armoured warfare by the middle of the war in his conception of the need for training. However, even on the eve of and in the course of his great victory, the Battle of El Alamein he had trouble getting his armour to deliver what he wanted them to. This was not because of a lack of senior officers’ training. It might be said that Montgomery’s own experience and mental outlook had not prepared him for the challenge of armoured warfare. However, Montgomery differed from Liddell Hart in several important respects. What can also be said, however, is that Montgomery’s ‘model’ for armoured warfare differed from O’Connor’s victories in 1940-41 in its evolution during 1942-43. The important victory at El Alamein in the Western Desert gave Montgomery great influence to shape the process of learning lessons from North Africa and in the creation of doctrine for the invasion. British success in the desert and later on clearly owed as much to Montgomery’s imposition of the principal of combined arms cooperation on his subordinates as it did to the superiority or otherwise of British materiel at the time.

What it is that still had to happen, is the subject of the chapters which follow, starting with the ill-starred influence of desert-influenced fighting methods and doctrine in Normandy.

1 N. Hamilton, *Monty:The Making of a General 1887-1942* (London: Hamish Hamilton, 1981), p. 153, *The Full Monty: Montgomery of Alamein 1887-1942* (London: Penguin, 2001), p. 132. Hamilton’s trilogy concerning Montgomery, *Monty* (1981-86) is a key biography for all phases of Montgomery’s career.

See, for example, IWM, Lyne Papers, 71/2/4, Maj.-Gen. L.O. Lyne, unpublished memoir, n.d., Ch.
2 1, p. 1.
3 Hamilton, *Monty: Making of a General*, p. 183.
4 Hamilton, *Monty: Making of a General*, p.192.
5 Montgomery's major published works – the 1920s and 1930s: 'Letter of Advice to a newly appointed Adjutant in the TA', *Army Quarterly* 9 (October1924); Maj. _____, 'The Growth of Modern Infantry Tactics', *Antelope* (1925, January – 1926, January), 'Some Problems of Mechanicalisation', *Antelope* 2 (October 1926); Lieut.-Col. _____, *Infantry Training Manual*, Vol. 2, (London: War Office, 1931); Brig. _____, 'The Problem of the Encounter Battle as affected by Modern British War Establishments', *Royal Engineers Journal* (September 1937), 'The Major Tactics of the Encounter Battle', *Army Quarterly* 26 (July/August 1938), Gas Trials Report, (London: War Office, 1938, September).
6 Hamilton, *Monty: Making of a General*, p. 175.
7 Ibid., p.183. See Capt. B.H. Liddell Hart, 'The Development of the "New Model" Army: Suggestions on a Progressive, but Gradual Mechanicalisation', *Army Quarterly* 9 (October 1924), 37-50. Montgomery's first published article, on the subject of training the Territorial Army, was in the same number.
8 Hamilton, *Monty: Making of a General*, p. 168.
9 Maj. B.L. Montgomery, 'Some Problems of Mechanicalisation', p.196.
10 Capt. B.H. Liddell Hart, 'The Development of the "New Model" Army', pp. 42-43.
11 Hamilton, *Monty: Making of a General*, p. 212.
12 Ibid., p. 164; Brev.-Maj. B.L. Montgomery, '17th Infantry Brigade Summary of Important Instructions', (Cork: H.Q. 6th Division, 1921), 'Tactical Notes for use in the West Riding Area and 49th (West Riding) Division, TA', (York: H.Q. [?]49th Division, 1923), 49th Division Training Lectures, (York: H.Q. [?]49th Division, 1924, January – March).
13 See Montgomery Papers, BLM 8/1-9, for copies made by Montgomery of his confidential army reports. His superiors agreed that Montgomery was not only an excellent trainer of troops he was also, in Burnett-Stewart's view, 'full of ideas', while Wavell gave it as his opinion that Montgomery had 'one of the clearest brains […] in the higher ranks'. However, coming to a more completely rounded understanding of what kind of person Montgomery was by 1939 also means taking on board further comments of these two commanders, including, from Wavell, the sobriquet of being 'an enthusiast in all he does', which may have been what led some, such as Burnett-Stewart, to gain the impression of 'a rather imperious commander'.
14 Hamilton, *Monty: Making of a General*, p. 168.
15 However, a quasi-official compendium to accompany *FSR* illustrating the content of each principle or method by means of examples from military history was also produced. The numbering of chapters and sections in this accompanying volume corresponded with that of *FSR*. See, for example Maj. H.G. Eady, *Historical Illustrations to Field Service Regulations, "Operations", 1929* (London: Sifton Praed, 1930).
16 IWM, Montgomery Papers, BLM 11 and 13, 11/1,'9th Infantry Brigade Instructions for Individual Training, 1937/38', pp. 1 and 4.
17 Brig. B.L. Montgomery, 'The Problem of the Encounter Battle', p.340.
18 Ibid., p.342.
19 Larson, *The British Army*, pp. 97-98.
20 Montgomery, 'The Problem of the Encounter Battle', p. 340.
21 Ibid., p. 341.
22 Ibid., p. 342. (Emphasis added).
23 Hamilton, *Monty: Making of a General*, p. 264; Montgomery, 'The Problem of the Encounter

Battle', p. 346.

24 IWM, BLM 12/1, 'Report on Gas Trials', 1938, Section 1, p. 1.

25 IWM, BLM 11, '9th Infantry Brigade Instructions for Individual Training', p. 4.

26 Hamilton, *Monty: Making of a General*, pp. 248-49.

27 Liddle Collection (1914-1918), University of Leeds, GS0086 Barker (General) Sir Evelyn, Tape 467: interview recorded with Peter Liddle.

28 Higher commanders were expected to place themselves 'beyond the reach of distraction by local events', War Office, *Field Service Regulations, Volume II, Operations* (London: HMSO, 1920), pp. 146-7.

29 See Larson, *The British Army*, pp. 102-104.

30 Capt. Sir B.H. Liddell Hart, *History of the Second World War* (London: Papermac, 1992 [1970], pp. 116-127 (p. 124).

31 O'Connor (like Guderian) had trained as a signals officer. The feasibility of controlling fast-moving forces by voice communication from a command vehicle had been demonstrated as early as the "Mechanised Force" manoeuvres of 1927 and 1928.

32 K. Startup, in his dissertation profiling O'Connor's life and career, states: "O'Connor was the epitome of the front line commander, who is completely at ease when conducting a campaign from the back seat of a staff car, with only a small headquarters truck nearby", 'General Sir Richard O'Connor, A Profile of his Life and Career', (unpublished master's thesis, Virginia Polytechnic and State University, 1977), pp. 112-113. Montgomery famously used a number of the Tourer versions of the Humber 'Snipe' Mk. 2 staff car during the war.

33 War Office: *Middle East Training Pamphlet No. 10: Lessons of Cyrenaica Campaign, December 1940-February 1941*, ([?]April 1942), Part III, Section1, para. 8, p. 41.

34 S. Brooks, ed., *Montgomery and the Eighth Army: A Selection from the Diaries and Correspondence of Field Marshal the Viscount Montgomery of Alamein, August 1942 to December 1943* (London: The Bodley Head/Army Records Society, 1991), pp. 20 and 121.

35 Gen. Sir B.L. Montgomery, *Some Brief Notes for Senior Officers on the Conduct of Battle* (December 1942), p. 6. (Emphasis added.)

36 Gen. Sir B.L. Montgomery, *Conduct of Battle*, p. 7. (Emphasis added.)

37 Gen. Sir B.L. Montgomery, *Conduct of Battle*, pp. 9-10

38 S. Brooks, (ed.), *Montgomery and the Eighth Army*, p. 74

39 This description of Lumsden was provided to the author by Lieut. Col. R.R. McNish.

40 S. Brooks, (ed.), *Montgomery and the Eighth Army*, p. 82.

41 Ibid., p. 83.

42 Ibid., p. 94.

43 Gen. Sir B.L. Montgomery, *Some Notes on High Command in War* (January 1943), p.1

44 S. Brooks, (ed.), *Montgomery and the Eighth Army*, p. 196.

3

Relevance of Manoeuvre v. Pitched Battle, and the Effects of Montgomery's thinking, in early Normandy Operations

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3.1 Conflicting battle ideas

In Normandy, there were eight principal 21st Army Group operations in the Anglo-Canadian sector. They were: PERCH (10-14 June 1944), EPSOM (26-30 June), CHARNWOOD (8-11 July), GOODWOOD (18-20 July), SPRING (25 July), BLUECOAT (30 July-6August), TOTALIZE (7-10 August) and TRACTABLE (14-16 August). They are looked at, where necessary in the context of overall operational development, to get the full view across 21st Army Group of what was working and what was not working. Further, this chapter, and the next chapter, are not designed to be a comprehensive overview of Normandy operations: this is a story of hard-learned lessons. This story of lessons learned is then contextualised as the overall story unfolded through the liberations of the Low Countries and the invasion of Germany. Thus the operations chosen are designed to be representative 'snapshots' of what was going on at that period in the campaign. The early Normandy operations were breakthrough attempts, aimed at capturing roads leading to Caen. Later operations were aimed at capturing roads leading on from Caen.

Villers-Bocage and the defeat suffered by the 'Desert Rats', 7th Armoured Division (Operation PERCH), has been widely held to epitomise the failings of British armour during the early fighting in the *bocage* countryside in Normandy.[1] Conventionally, historians have concentrated on the sharp contrast between action before and after that time (although there were plenty

of ‘failures’ after). Past experience appeared to suggest that what was wanted for decisive victory was not only better tanks and tank crews, but also more tanks than the enemy. The 7th Armoured Division had gained its reputation in open country operations in the Western Desert of North Africa but fighting in the close, congested terrain of North-West Europe required a very different approach to both operations and techniques. Historians have highlighted a number of ‘key issues’ centred on armoured doctrine in the Normandy campaign, apparently expressed in the Villers-Bocage experience. These included problems concerning the use of armoured divisions, the precise role of independent armoured brigades, and the effectiveness of armour-infantry cooperation. Three key arguments or explanations have been offered for these failings, relating respectively to the conceptual, material and moral elements of military effectiveness. Further, it has been suggested that too much analysis has assumed failure because of the way the British fought with armour in 1944, which was not the same way as the Germans in 1939-42 – ‘the 1940 Panzer way’, or the way the British fought in 1941 and 1942.[2] Furthermore, failure was assumed because they did not employ the panzergrenadier model for armour-infantry organisation and structure. Yet the Villers-Bocage battle was just one action and, after it, armoured formations proved flexible enough to adapt. It has been argued that both independent brigades and divisional brigade groups had developed workable tactics for infantry-armour cooperation by the middle point of the campaign in Normandy.[3] The implications of these new tactics for armour-infantry unit organisation and structure had yet to be fully explored. However, within this time scale, some change happened faster in the independent tank and armoured brigades, as this chapter and the next will demonstrate. Further, although the most significant of the mid-level responses to the new combat problems was the ability and flexibility to depart from War Office doctrine and the lessons Montgomery was trying to implement, as this study will demonstrate the explanation hitherto given for change and adaptation is incomplete. The chapter will examine how this actually played out on the ground, thus moving from a consideration of doctrine at a conceptual level to relate this to actual events on the ground.

As the war progressed, battle lessons learned by the army in the North

African and Italian campaigns, commanders' experiences of fighting in Libya, Tunisia, and Italy, and developments in weapons technologies all played a part in the creation of doctrine for the assault on North-West Europe. The important victory at El Alamein in the Western Desert gave Montgomery great influence to shape the process of learning lessons from North Africa. Nevertheless, it was the view of a sizeable number of officers that the experience of armoured warfare in North Africa served merely to confirm the soundness of earlier, pre-war thinking and experience. Brigadier the Hon. W.R.N. Hinde and Major-General G.W.E.J. ('Bobby') Erskine were representative of this 'Desert Warfare orientated' type of thinking. Hinde's command of 22nd Armoured Brigade, 7th Armoured Division is a yardstick for desert-influenced methods of combat in Normandy. Further, in a period when doctrine was being changed at lower level, his involvement in the process by which it was being criticised, or created, may be considered as a baseline against which the involvement of others can usefully be compared. Erskine commanded 7th Armoured Division during the Battle of Normandy, having successfully commanded the same division in Tunisia. He took command of the division there in January1943 after service as a commander and staff officer in the Western Desert and was a widely respected commander.

In Normandy, the breakout was preceded by two months of intense, static warfare. It was a trying time for all commanders, at every level. There were failings in performance, documented by junior commanders, which were recognised very quickly by senior officers on the ground. Further, as will be shown, Major-Generals G.P.B. Roberts and L.G. Whistler, two divisional commanders of particular importance who made their names as highly successful commanders in the Western Desert, were important as – respectively – an instigator and a driver of further tactical change in Normandy, and, thus, are representative of different types of officer than Hinde and Erskine. Erskine and Roberts both commanded armoured divisions in Normandy but Roberts, unlike Erskine, successfully adapted to North-West Europe. However, neither Roberts nor Whistler was bound by or to the lessons learned from previous victories. Furthermore, the first-hand accounts from command at the divisional and brigade levels hint at the existence of a

group of officers at high level who never believed that desert practice was necessarily ‘best practice’.

Another division in XXX Corps during EPSOM, June 1944 was 49th (West Riding) Infantry Division commanded by the equally respected Major-General E.H. Barker. He did not serve in the desert and took command of 49th Infantry Division in the UK in April1943. After hearing of Erskine’s dismissal from command of 7th Armoured Division in August 1944, Barker, who had criticised the action at Villers-Bocage and believed that ‘his [Erskine’s] chaps did make a pretty good mess of the party on the right of the British’, expressed long-standing doubts about the relevance of warfare as practised in North Africa to the conditions in North-West Europe. ‘I always felt that B[obby]’s desert training would not be any good in this form of warfare’.[4]

3.2 Lessons drawn by Montgomery from 8th Army’s experience

The independent tank and armoured brigades were intended to provide, or be available to provide, close support for infantry divisions in the assault phase of operations in North-West Europe. War Office doctrine argued that the independent Tank Brigades, equipped with the heavily armoured A22 Churchill infantry support tank, were best suited to close assault operations. Some eleven months before D-Day, however, Montgomery held, in a letter to the Vice-Chief of the Imperial General Staff, that ‘a heavy infantry tank is not wanted’.[5] The lessons he drew from 8th Army’s experience of tank-infantry cooperation in the desert varied considerably from those reported by 1st Army in Tunisia. Its commander, Lieutenant-General Anderson, wrote thirteen months before D-Day:

> I think my type of country brought out more things which apply to Europe than does desert fighting [:] the great importance of night work; use of concentrated art[iller]y; need for much more skill in using our mortars; the fact that old hands of the last war reacted to the threat from open flanks far more actively than did youngsters (we <u>always</u> had flanks wide open!); *value of Churchills*; need for infantry in an armoured div[ision] to be intensely pugnacious & quick in attack[.][6]

It had been the War Office’s original hope that all independent brigades would be equipped with Churchills but not enough of these could be

produced. Consequently, the Sherman was pressed into service, creating the distinction between tank and armoured brigades; but Montgomery and his 8th Army staff were resistant to any doctrinal distinction between armoured brigades largely equipped with Sherman tanks and tank brigades equipped with Churchills.[7] Subsequently, Montgomery over-rode the experience of 1st Army and discounted the value of its commander. 'I am sorry about Kenneth [Anderson]', Barker wrote to his wife after D-Day, 'but he and M[ontgomery] never got on and it would be an impossible situation for everyone if K[enneth] was in it'.[8] Attempts which had been made within 21st Army Group to develop specific tactics for Shermans to be used in the infantry support role were effectively blocked after Montgomery's arrival.

However, very soon after the invasion of Normandy it was coming to be believed that the objectives of an army tank battalion could be to use the Churchill's cross-country ability to get into positions where it could not easily be seen, with the object of closing the gap between the superior performance of the German 88mm or long 75mm guns and the Churchill's own armament in order better to support the assaulting infantry.[9] This could have drawn on the experiences of tank brigades in the Tunisian campaign, which also led to the conclusion that 'the tank must not be tied rigidly to moving at infantry speed but must move where they can best support the infantry by fire, either direct or from flank and hull-down positions'.[10] This might be considered analogous not to the methods of armour-infantry cooperation which had evolved in the Western Desert but more to those of air-ground cooperation. The two strands of thought demanded roles for the tanks which would prove contradictory. This was compounded by a failure to resolve the issue of what might be the most appropriate tactics for different types of tank.

Official doctrine emphasised the idea of close physical proximity. The November 1943 pre-Montgomery doctrine of 21st Army Group (General Sir B.C.T. Paget, C-in-C) for the cooperation of tanks with infantry divisions, authored by Brigadier H.E. Pyman, BGS (Training) 21st Army Group, was that an all-tank assault echelon would be unusual. Montgomery's initial idea was that the tanks should go first, well ahead, and the infantry should follow.[11] Pyman's doctrine appears to have made an impact on 6th Guards

Tank Brigade and particularly on 3rd Tank Battalion Scots Guards in training.[12] This was, however, before Montgomery's intervention and before the problems in Normandy had become apparent when doctrine was 'unlearned' and changed again. However, the doctrine constructed by Pyman and Paget is illustrative of competing sets of ideas regarding minor tactics, yet another unhelpful obstacle to be surmounted.

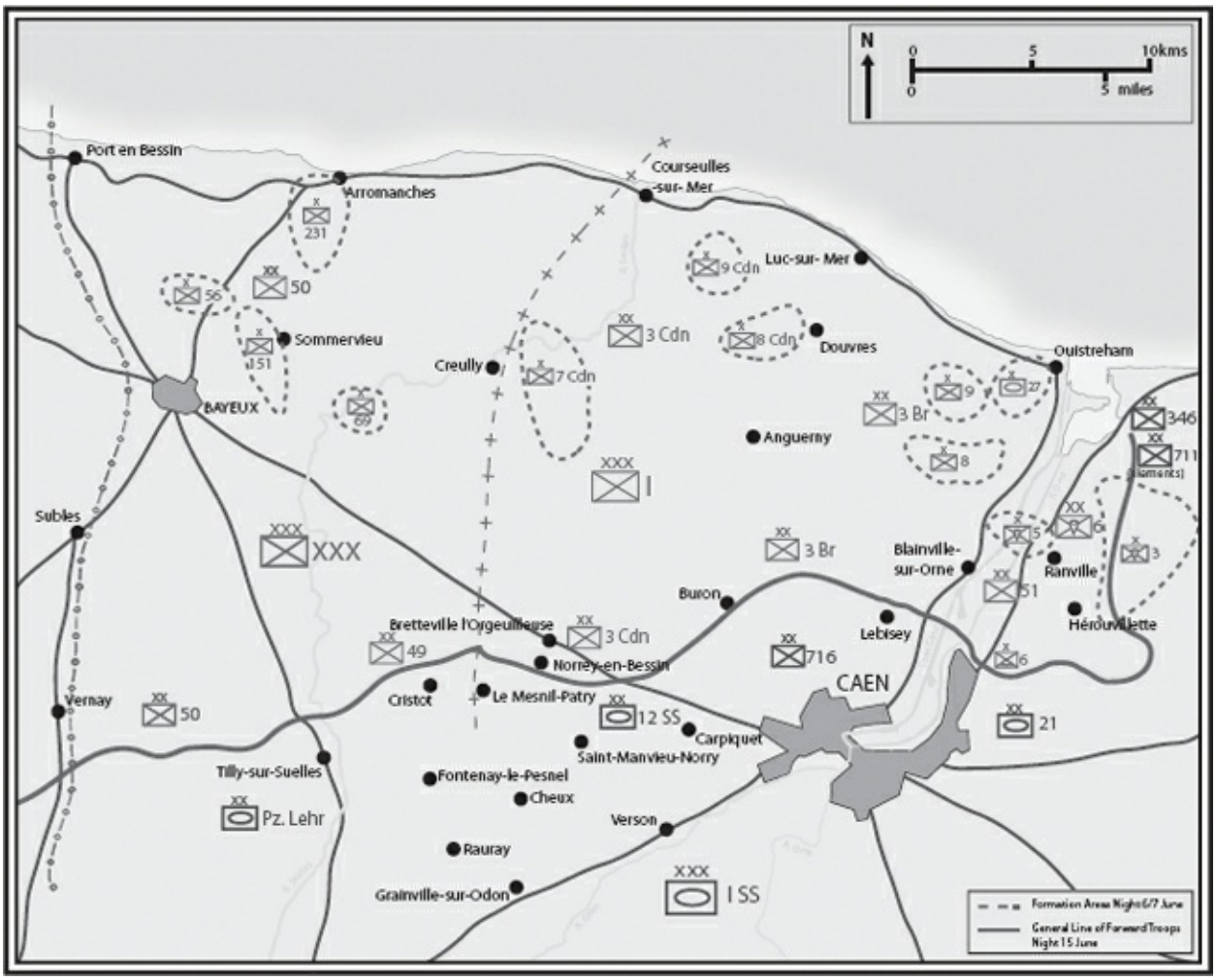
Further, before D-Day Montgomery had laid down that '[a]rmoured units and B[riga]des must be concentrated quickly as soon as ever the situation allows […]; speed and boldness are then required, and the armoured thrusts must force their way inland.'[13] In Normandy, more rapid tempo in sequencing between phases and operations was a factor in Montgomery's response to new tactical and operational problems. Montgomery re-imposed pyramidal, hierarchical command on the 8th Army (after many experiments with decentralisation by previous commanders). This was intended to allow Montgomery to keep a firm grip on what his subordinate commanders were doing. In the same way, he imposed a line of command through corps, divisional, and brigade structures on 21st Army Group for Normandy. However, it was still not enough to ensure speed and boldness. Commanders were not acting in the way he wanted them to. The reason for this was a systemic failure to ensure that those at all levels of command – especially those closest to the actual fighting – at once possessed a common approach to operational methods flowing from a common understanding of how to fight and at the same time could put into practice moving from observation, orientation and decision to action at the pace Montgomery now demanded. Montgomery was asking a lot, but he had to in order to get the job done. But he still did not fully understand that the problem was one of command and control as well, that is of an appropriate command philosophy, yet within a 'proper' chain of command.

3.3 Early battles for Caen: manoeuvre (PERCH) …

In the process of fighting from 6 June, the supposed lessons of North Africa were displaced by new experiences. It was soon evident to some in 21st Army Group that the methods utilised in the North African desert were not

going to work in Europe. Within days of the initial landing it was plain that specific operations were not going well. In the British/Canadian sector, gains anticipated on D-Day had not all been achieved. Expected progress in consolidating the bridgeheads established on D-Day had still not been made. There even seemed to be a chance that operations to create the conditions for a breakout might stall completely, the military situation return to a stalemate such as had existed in the First World War and the theatre turn into a campaign of attrition. Operation PERCH (12-15 June 1944), the daring 'right hook' manoeuvre aimed at Villers-Bocage and the vital high ground to its northeast was intended to drive a wedge between German forces in western Normandy and Caen – preventing reinforcement of Caen.

This was to be achieved by XXX Corps with divisions that had served so well in North Africa, foremost among them the 'Desert Rats'. Montgomery argued, however, that this had all been anticipated and was just part of his original plan, namely that remorseless pressure rather than remarkable progress by the British would force the Germans to commit their armoured reserves on the left while he built up for a breakthrough by the Americans on the right.[14] Villers-Bocage was never in itself an important objective to Montgomery. But the defeat at Villers-Bocage was a setback. However, the consequent failure of PERCH set up a pattern which shaped the future of the Normandy campaign. The British were forced to recognise that the resolute German defence and the dense anti-tank defences which had been put in place in the difficult terrain required new operational and tactical methods if they were to be overcome. The setback at Villers-Bocage was largely created by imprecision by all of the senior commanders as to Montgomery's subsequent intentions at the interface of concept and execution.



Map 1 The expansion of the British bridgehead 6-15 June: Villers-Bocage itself is just off the map at the confluence of the roads south from Tilly-sur-Suelles and Grainville-sur-Odon

The commander of XXX Corps in June 1944 was Lieutenant-General G.C. Bucknall, whose previous service had been in Italy where he had established a reputation as a successful divisional commander. When Erskine took command of 7th Armoured Division in Tunisia in 1943, command of the division's 22nd Armoured Brigade went to Brigadier W.R.N. Hinde. The British force at Villers-Bocage was composed of two regiments of this brigade and elements of 131st Brigade, the divisional lorried infantry brigade. Hinde was, therefore, the commander 'on the spot' at Villers-Bocage. It is useful to recall here the idea of Jock columns, and the fact that the desert war had been a war where movement, speed and surprise were very important, particularly in its early stages. This experience coloured Erskine's approach. The first task was to push through 50th Infantry Division on to Tilly. Erskine

afterwards described his task thus:

> After some unsuccessful stabs at Tilly, I suggested the use of the Division's mobility round the right flank of 50 Div. I was sure there was a soft spot here and had in fact reconnoitred routes and had a cut and dried plan for a swoop on Villers Bocage.[15]

The thrust by 22nd Armoured Brigade at Villers-Bocage on 13 June 1944 drew heavily for its inspiration on the idea that finding an empty or open flank was tactically very important and also on the use of an armoured column to drive in the enemy rearguards. Erskine appreciated, however, that if successful, such an armoured manoeuvre also deprived the enemy of the possibility of defence in depth, with beneficial results that facilitated the subsequent operations.[16] Such a column would, however, be in a parlous position if ambushed by German units with tanks such as the powerful Tiger I (PzKpfw VI Tiger 1) and Panzer IV as happened on Operation PERCH. When it was decided that the situation was becoming untenable and that 22nd Armoured Brigade must be withdrawn from Villers-Bocage, the Desert Rats contracted into a small defensive box position near Amaye. It was decided that 22nd Armoured Brigade should withdraw from it during the night of 14/15 June. Heavy artillery fire had helped keep the box intact during 14 June. This was not the desert, however. Captain J.R. Brown, serving with 3rd Regiment Royal Horse Artillery., the divisional artillery attached to 131st Brigade, 7th Armoured Division, recorded:

> Our troops began to feel their way forward over country where our O[bservation] P[ost]s found observation difficult and by early in the afternoon our forward troops (the tanks) were beyond the town of Villers Bocage leaving pockets of enemy behind. Then the trouble started and it was evident that one division could not hope to break through the strong enemy positions.[17]

Because of the nature of the country it was difficult for the artillery to provide accurate fire support. Even though there was a successful anti-tank defence at Villers-Bocage which thus apparently confirmed lessons which had been learned by 7th Armoured Division in the desert and Tunisia, in particular during the Medenine battle in March 1943, it was not what was required. In Erskine's view, 'the [Medenine] battle proved conclusively that infantry armed with the 6 pdr anti-tank gun was a match for the German Mk IV and the days when Inf[antry] were constantly over-run were finished' and

this held true with respect to anti-tank defence at Villers-Bocage.[18] Success at Medenine had been 'in fact the end of Rommel and a fitting reward for a 2000 mile chase'.[19] Reflecting official policy, the armour and infantry had been brigaded separately and were required to fight the same battle separately: 'the two Arm[oure]d B[riga]des [22nd and 8th] were positioned […] in such a way that they could work in co-operation [… while the infantry] will be prepared to fight their own fight with their A[nti-] T[an]k guns'.[20] Erskine was attempting to use the same North African methods he had been using at Medenine and these did not work so well in Europe.

In the earlier fighting during Operation PERCH the tanks went first and the infantry came up later. This was found to be ineffective. It was Bucknall who realised that leading with infantry would pay best in the *bocage* type of country.[21] However, at that stage of the campaign it was still the norm that senior officers were permitted wide latitude with respect to methods.

The paradox of Villers-Bocage was that the successful anti-tank defence of the box did vindicate lessons learned in the desert and Tunisia, in particular during the Medenine battle. Although no wire or minefields protected the British positions at Medenine, the infantry were well dug-in, in well-sited defensive positions and well equipped with anti-tank guns, including some of the new 17-pdrs. As Erskine put it: '22nd Arm[oure]d B[riga]de were spoiling for a fight and we had a very successful little party in capturing Medenine and some very important high ground overlooking it'.[22] This had included defeating a German counter-attack which was led by tanks, showing that infantry need not be overrun by tanks if they had sufficient, well placed anti-tank weapons. While effective, this was, however, incompatible with fire and manoeuvre tactics and the quicker tempo for sequencing operations as between defence and attack now being demanded by Montgomery, who considered Erskine had been 'too long on the same line'.[23] Montgomery was conscious that the burden of the offensive in North-West Europe would have to be carried by 21st Army Group until the end of the campaign. It was also evident to others: 'The whole thing is to keep this battle fluid and not allow it to crystallise', Barker wrote to his wife.[24]

As Bucknall, XXX Corps commander, understood it PERCH 'was intended to be a sharp blow in the spirit and manner in which F.M.

Montgomery wished these dog-fights in the struggle to establish the Bridgehead […] and was NOT a major attack with all forces combined to achieve a major Army object'.[25] He viewed the operation only in relation to the development of some means of breaking out of the stagnation threatening his front. All this flowed from Bucknall's apparent belief that:

> the main battle was proceeding for the capture of CAEN. 'PERCH' was a subsidiary op[eration] to free the front of 30 Corps (and incidentally act as a diversion). [Therefore] 30 Corps was under restriction as regards art[iller]y amm[unition] expenditure & material & was definitely precluded from launching at this moment into a 'Corps Battle', which might compromise the Army Com[man] d[er]'s plan, lead to a requirement for additional t[roo]ps to patch up or extricate, or increase art[iller]y amm[unition] expenditure.[26]

He believed that his decisions reflected Montgomery's concept of operations for this particular operation.

Bucknall almost understood Montgomery's operational methods, or understood them in theory. However, Montgomery was a very 'modern' commander in the speed at which he moved to change his plan in response to changing tactical situations. If there was a flaw in Bucknall's understanding it was that he continued to think of Villers-Bocage and PERCH in terms of a subsidiary action or sideshow. There were no sideshows.

Hinde's reaction to the Villers-Bocage setback and the failure of PERCH was criticism that the close country did not call for the tanks and infantry of the armoured divisions' armoured brigades but instead called for infantry supported by the independent tank brigades. While he drew no lessons from 22nd Armoured Brigade's operations from 6 to 15 June to correct what had been exposed as a flawed approach to operations, some middle ranking officers evidently saw the importance of doing so, as will be seen in the next chapter. Further, most modern historians accept Montgomery's own account and the older accounts that the objective was to seize Villers-Bocage and then advance beyond it and into the flank of Panzer *Lehr* and that for Montgomery and General Dempsey PERCH was directly connected with the battle of Caen.[27] However, Hinde held a significantly different view of the operation; to him PERCH 'was never connected in my mind with any enveloping move against Caen, and I am perfectly clear that it was never represented to me that for that reason it was vital that it should succeed.' It appeared to him that

‘General Dempsey’s view of the significance of this operation was not appreciated by subordinate commanders, and that is possibly understandable in view of the extreme speed with which the whole operation was laid on’.[28] Although it was Montgomery’s and Dempsey’s intention to push 7th Armoured Division on to the high ground northeast of Villers-Bocage at Point 213 (in 1944, now Point 217) and then on towards Evrécy to envelop the German line and make it untenable, this did not filter through to the commanders in 22nd Armoured Brigade, whose instructions were to capture Villers-Bocage and Point 213.[29]

Hinde was able to analyse the problem as being one that the armoured division was unsuited to address but he was not able to propose the solution. Thus, after D-Day he commented that ‘the need for more inf[antry] was felt at once’. However, the fact that ‘inf[antry] can only see to the next hedge and t[an]ks possibly to the next hedge but one makes maint[enance] of direction and keeping touch of exceptional difficulty’. Further, the difficulty encountered in fixing the locations of German anti-tank guns and other positions meant that the country ‘was unquestionably one for inf[antry] supported by a few t[an]ks and not for t[an]ks with a small supporting component of inf[antry]’.[30] In other words, the close country called for infantry supported by the heavy tanks of the independent tank brigades, not for the tanks and infantry associated in the armoured brigade of an armoured division which should continue to act as ‘light cavalry’.

If what Hinde was saying in 1944 was influenced by ‘armour-only’ cavalry ideas of the 1930s in this way, then the desert had shown that they could work in an ideal set of circumstances. Thus he was able to write of ‘hare-ing after the Bosch [sic] as fast as we can go’.[31] The problem was that in northern Tunisia, Italy and Normandy they could not work in anything less than ideal circumstances, a conclusion also reached by Hinde: for example, the nature of the terrain in northern Tunisia and southern Italy favoured the defence.[32] However, Montgomery’s ultimate outflanking of the Mareth Line in Tunisia in March 1943 which led to the Gabes Gap and Wadi Akarit battles in April 1943 appeared to substantiate his belief that while strategic surprise was not always possible tactical surprise was. As a cavalryman, Hinde would have been very comfortable with just such a manoeuvre: ‘things have gone

extremely well and the Mareth line as a line is finished'.[33] Hinde was made a member of the Distinguished Service Order for his role in the advance from the Wadi Akarit to Sfax and secured a bar to his DSO during the advance from Medjez el bab to Tunis. As Erskine put it: 'we had some very interesting and profitable fighting through Sfax and Sousse … [T] he tanks never had better fun … [W]e cut off a great many Germans who were facing 51 Div on the road and did not realise we were on their flank and behind them'.[34] One may reasonably infer that Hinde shared this view, for he evidently excelled at that type of fighting.

In Italy, terrain and the way in which the Germans harnessed the topographical characteristics of the Italian peninsula meant there was no effective way to bring to bear the superiority the Allies enjoyed in tanks and artillery and airpower. If stalemate was to be avoided, the series of German defensive lines running across Italy meant the only alternative to hard slogging was to outflank by sea. There was no other alternative. Thus, battles in Italy could be 'static and bloody affairs which involved protracted efforts to break strongly-held defensive positions. […] On the other hand, these campaigns witnessed bold amphibious strokes, accompanied by the innovative application of force in complex joint and combined operations'.[35] Eisenhower's and Alexander's conclusion on the advantageousness of an amphibious landing near the Italian capital had, as its basis, the concept of applying the principal of concentration or mass, to bring to bear Allied superiority in tanks, artillery and airpower by outflanking the heavily fortified Gothic line. Indeed, the Anzio operation and the Arnhem operation can be seen as outcomes of attempts to solve very similar problems at the level of theatre strategy, both of which foundered on the practicality of a link up of the assault and relieving forces. In the Sicily and Italian campaigns, at the operational and tactical levels however, the use of tanks was limited for the most part to close support of the infantry. Some infantry and armour commanders saw the necessity of learning lessons from this.[36] However, as Hinde's first letter from Normandy after D-Day made clear, he had learned no practical operational or tactical lessons from his experience in Italy, commenting 'it is an infantryman's country, far from easy for us and we shall be glad to see something a bit more open'.[37]

At the highest command level, Operation PERCH was understood strategically as an armoured exploitation to create an untenable situation ‘in the field’ for the enemy. However, at the operational level and at the level at which the operation translated into fighting this was not understood. Bucknall, the commander of XXX Corps saw the operation as a strategic diversion. Erskine seems to have had a conception of penetration as a tactical opportunity to exploit the mobility of an armoured division from his experience at Sfax and after, but also a limited conception of what Villers-Bocage was all about and a practical inability to see how to use his experience in North Africa in the face of ‘infantryman’s country’. The very considerable differences in the conception of the operation up and down the chain of command were magnified by the differences of experience and of the interpretation of that experience which commanders brought into play when called on to carry it out.

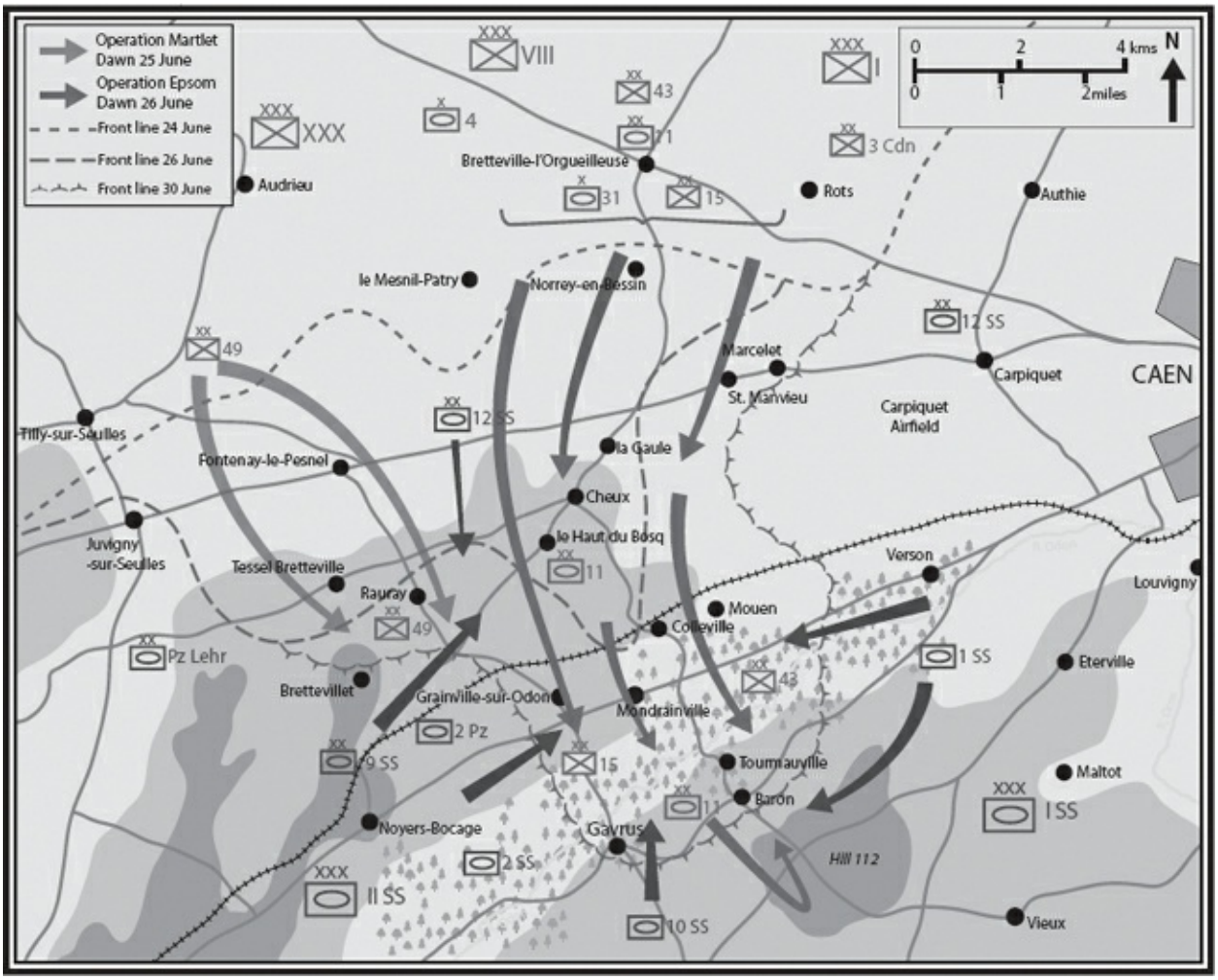
3.4 … and pitched battle (EPSOM)

Whereas Villers-Bocage had been an armoured brigade attack, what followed at Fontenay-le-Pesnel on 25 June 1944 (and during Operation EPSOM) was an infantry attack with an independent armoured brigade supporting. XXX Corps was given the task of covering the right flank of VIII Corps’ advance during the EPSOM offensive with a preliminary, southward thrust to secure the high ground overlooking VIII Corps’ attack area: this task carried the codename MARTLET.

EPSOM was the operation which took the British over the River Odon, creating a distinct salient into the enemy line that was nevertheless narrower than was planned. However, it failed to also cross the River Orne and to cut Caen off from the south. In what would become familiar in subsequent operations, well-concealed German anti-tank guns picked off Allied tanks, whilst longer range 88mm fire from high ground blocked the advance. Further, more and more of the tanks and infantry of VIII Corps had to be employed protecting exposed flanks rather than securing additional ground. Furthermore, the operation saw ‘a number of problems emerge over infantry-tank co-operation’.[38] In particular, during EPSOM, no way was found to

overcome the German gun positions on the ridge tops to allow tanks to capitalize on their gains on the lower slopes between the valleys of the River Odon and the River Orne. The operation failed to achieve almost any of its objectives but it had ‘undermined the German ability to prepare a major counterattack in the area, as arriving reinforcements had to be fed piecemeal into the battle to block British progress’.[39]

MARTLET (the subsidiary action of EPSOM, 25-28 June 1944) was to be carried out by 49th Infantry Division in its first major battle as a complete division. Tank support was to be provided by having 8th Armoured Brigade under command. Lieutenant S. F. Hills, of ‘C’ Squadron, Nottinghamshire Sherwood Rangers Yeomanry, 8th Armoured Brigade, highlighted the differences between North African experience and tank warfare in the Normandy countryside (Hills’ narrative is reproduced minimally edited so as to attempt to give him his own voice):



Map 2 Operations MARTLET and EPSOM, 25-26 June.

> How some of our desert veterans longed for the open spaces of Libya and Tunisia, where tanks could manoeuvre and fight an altogether different type of battle to this close-range slugging match of attrition in which they were now involved […]. The main difference, apart from the ranges at which the respective battles were fought was the nature of the ground. In rolling desert, when attacking or defending tanks remained hull-down and invisible in small depressions, there were advantages for both sides. Furthermore, tanks could move at speeds which made them difficult targets, and there was no danger of an infantryman with a hand-held Panzerfaust suddenly popping up from nowhere to fire at close quarters. The bocage therefore posed unfamiliar and disconcerting problems, even for experienced crews.[40]

The divisional plan was for an advance on a two-brigade front with each brigade supported by tanks: 146th Brigade on the right (west) and 147th Brigade on the left (east). The method to be employed for this was that ‘arm[oure]d sq[uadro]ns will move f[or]w[ar]d after b[attalio]ns at […] first light to s[up]p[ort] the attack in the villages’. The attack was to be

accompanied by an exceptionally heavy barrage, including naval guns and the guns of VIII corps – one gun to less than ten yards of front – and strong air support was anticipated 'incl[uding] rocket[-firing] aircraft which can be over the target within 5 min[ute]s of briefing'.[41] The attack went in at 0415 on 25 June in a thick mist which it was thought would help the attackers. An hour and a half later Barker wrote to his wife:

> I hear the visibility is bad as there is a thick ground mist in the valley but that is to our advantage as his Panthers can't see. I gave the chaps a very strong barrage as I wanted to see that those going in for the first time had all the support I could give them. […] It's a lovely fine morning with no wind so I shall be getting full support from the air which is quite large.[42]

In fact, there would be no air support because of bad weather over the airfields in England. Further, the mist did not protect the advancing tanks and infantry. German mortars had been pre-registered on terrain features which assaulting infantry would obviously attempt to use for cover. This type of frontal attack where the troops followed a heavy barrage was reminiscent of 1915-17, and without air support, required reserves of infantry on a similarly large scale. It also required that the tanks and infantry know what was expected of them and commanders knowing what was happening to other brigades of the division if the attack was to be successfully pressed home. The infantry led the attack, a format which did not accord with the changes that Montgomery had brought to established doctrine before D-Day to make it reflect the experience of 8th Army: that in combined tank and infantry attacks the tanks should lead and the infantry should follow. It was essential for infantry and tanks to attack together. However, according to Hills's account of the Sherwood Rangers' battle 'tanks and infantry lost contact and everything became confused […] with enemy tanks of 12 SS Panzer dug in defensively to the east of the town, and we did not have enough infantry to take the village.'[43]

The official history demonstrates the slowness with which the operation went forward in its second phase: 'for some reason that is not explained a second battalion did not go forward to pursue the attack until nine o'clock in the evening'.[44] An important factor explaining the slowness with which the second assault was launched was that there were problems in marrying up tanks and infantry for it. An important technical issue had not been resolved –

using the Shermans for infantry support (again, Hill's text is unexpurgated):

> [T]he infantry was in single file on our right, the wrong side for our turretmounted machine-gun. They were moving cautiously, alert to strange noises and trying to pick out landmarks in the darkness. We passed all the ground we had passed earlier in the day and still there was no response from the enemy. Perhaps we had taken him by surprise. Then suddenly a machine-gun opened up, the infantry scattered and bullets hit the tank like the rat-a-tat-tat of a hammer. I ordered the tank to slew right and [the gunner] opened up with his machine-gun on the enemy and then fired two high-explosive shells which set the two-story building alight.[45]

Instead of the tanks and infantry moving together in a group, a more appropriate tactic using the fast, thinly armoured Shermans would have been for infantry to locate the enemy's strong points or tanks first in order to direct the Shermans onto them, rather than the infantry and the Shermans waiting to receive the enemy's fire. The failure of Montgomery and his ex-8th Army staff to develop specific tactics for Shermans of the independent armoured brigades in the infantry support role was at this early stage of the fighting now rebounding against those units of 21st Army Group which had not yet formulated their own plan for action.

The next day, 26 June, Barker planned a triple attack in a general south easterly direction to secure the higher ground between Fontenay and Rauray; 'the original plan remains in force […] but for the moment without quite such an ambitious tempo'.[46] Armour was to support infantry on to their objectives, then to exploit. As Barker saw it, the attack the previous day was the first to break the 'strong crust' the Germans had been able to build up during the delay in getting men and equipment ashore following the storm of 19-22 June, which severely damaged the infrastructure of the Mulberry artificial harbours. Armoured and infantry units had experienced great difficulties in co-operating with each other, however, over and above an insufficiency of infantry. Thus, while:

> [o]n the whole it was most satisfactory [… u]nfortunately the Boche took a lot of turning out of FONTENAY & was in some strongly fortified houses at the East end and which the Battalion in that sector couldn't clear so I had to put through another B[attalio]n in the evening when they found the Boche had withdrawn after the hammering we gave them. We knocked out 6 tigers [Tiger 1] & 2 panthers [PzPkfw V Panther] and 4 other tanks & took quite a few prisoners-all first class troops of 12SSPzDiv. I'm frightfully pleased with my chaps – they did excellently and are full of fight. […] News just in that chaps on my left getting on well & my chaps feeling forward against small groups of tanks. These Tigers and Panthers are a nuisance

as they have very heavy armour & one has to get a side shot at them.[47]

Thus, although acknowledging success regarding the capture of Fontenay, Barker recognised that beneath the surface difficulties in combined arms cooperation left so much to be desired that the pace or tempo at which it had been attempted to conduct operations was impracticable despite the qualities of the troops, generally aggressive tactics and generous artillery support. Orders that 8th Armoured Brigade with 1st Battalion Tyneside Scottish of 70th Brigade would drive in behind the enemy and capture Rauray – that is, exploit – were cancelled in favour of a more 'deliberate' advance.[48]

Barker's claims that his troops 'knocked out 6 Tigers & 2 Panthers & 4 other tanks' reflects the fact that at Fontenay, the British troops were up against some German troops equipped with what Buckley describes as 'the most feared and infamous German tanks of the Normandy campaign [:]the Tiger and Panther'.[49] Two panzer battalions in positions behind the German defenders of Fontenay numbered over forty Panthers in their order of battle. Two companies of Tigers were available for defending Rauray, as part of the reserve of I SS Panzer Corps.[50] German tanks were still numerous.

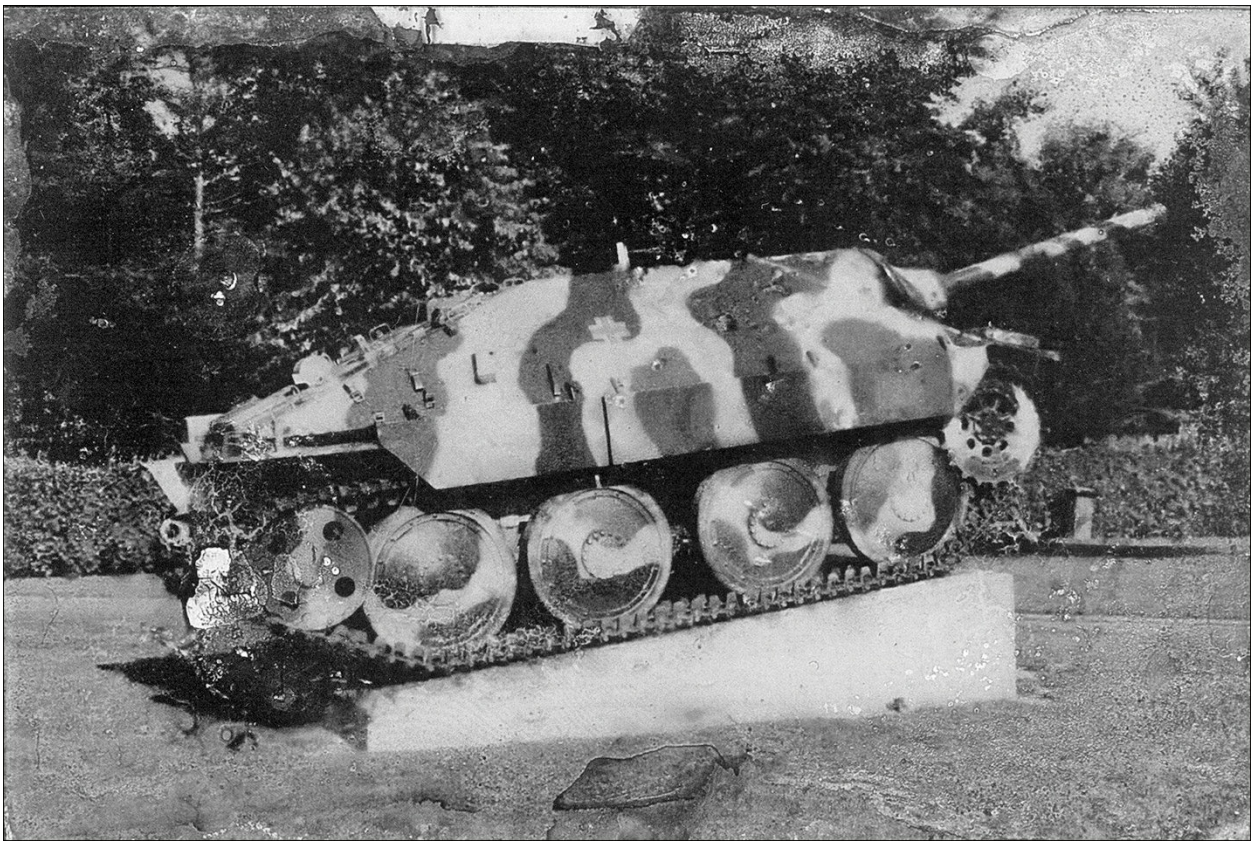


Plate 4 Jagdpanzer 38(t) ‘Hetzer’. German Jagdpanzers were anti-tank versions of existing tank chassis. Their powerful anti-tank guns were mounted in low-profile, well-armoured, casement-style superstructures, which made them excellent for use in ambush situations. The Hetzer was armed with the powerful 75mm Pak39 L/48 gun. The photograph conveys something of the Hetzer’s small size and limited height, which made it particularly difficult to spot (photo taken by the author outside the Battle of Normandy Memorial Museum, Bayeux).

The problem was less the virtual impregnability of the most modern German armour to direct fire, or even the capacity of the German armour collectively to counter-attack and also inflict tactical and operational defeats (as on 7th Armoured Division at Villers-Bocage), but rather its apparently endless capability to re-deploy even after, as Barker put it, a ‘hammering’ to block any British strategic penetration as at Fontenay, where the Rauray ridge was not completely taken by the time EPSOM was launched. This happened again during Operation CHARNWOOD (8-11 July 1944), when although the British and Canadians succeeded in breaking into Caen, they could not dislodge 12SS Panzer Division from positions which denied 21st Army Group access to the open country south of the town. German long-range tank fire from excellently camouflaged positions tended to make the security of

British tanks a function of their distance from the enemy (see Plate 5 for photograph of one farmstead used to hide a Tiger).

Plate 5 Norman farmstead used to hide a Tiger. A typical Normandy farm just outside Falaise – the crops, trees, and stone buildings provided good cover for the defence, to support a prepared ambush. These buildings concealed a Tiger tank according to the previous owner who was a child there in 1944 (photo: Lynn Kilgallon). (See also Plate 4, the much-smaller, low-profile tank destroyers leant themselves to this even more.)

Barker's tanks were incapable of knocking out a Tiger or a Panther except at closerange from the side or back and as he clearly recognised, this required first that his infantry locate these tanks, deal with the anti-tank weapons protecting them and thereby create a secure route of advance for the British tanks. His reference to infantry infiltrating forward against small groups of tanks and then his tanks getting a side shot at them suggest that tanks and infantry had begun to work more closely together in order to deny the German tanks their advantage of long range fire. Initial difficulties in

practising combined arms tactics were clearly comprehended by the end of June 1944.

Shortly afterwards, Brigadier A.D.R. Wingfield was appointed to temporary command of 8th Armoured Brigade. Barker told him that it was the army's policy that he should learn something about tank fighting in this very enclosed bocage country of Normandy so that he could pass on this experience to 34th Tank Brigade when he rejoined it. By the end of the day [3 July] his impression was that:

> 8th Armoured Brigade […] *had* learnt some useful lessons, such as the need to stay as close to the infantry as possible to avoid danger from snipers and bazookas […] and to spray the trees with bursts of machine-gun fire when entering a wooded area. It had also been discovered that the Sherman tanks […] were penetrated by the German 50mm [A/T] guns at these short ranges – unlike the long-range battles in the Desert – and that the Tiger and Panther tanks always scored with their first round […] due to the excellence of their telescopic sights.[51]

The shortcomings of the Sherman tank in the infantry support role were beginning to be well understood by the end of June-early July. This quotation from Wingfield is further evidence that shows that the process of adaptation had begun to deliver lessons over a week before the midpoint of the campaign. Barker's acknowledgement of his long-standing doubts about the relevance of desert-influenced methods of combat to Normandy, and his sympathetic reference to Anderson and his difficulties with Montgomery, indicate the existence of a group of officers who did not support the idea that previous 8th Army practice was necessarily best practice – or perhaps, more accurately, were not even influenced at first hand by desert practice.

3.4 Summing up lessons from early Normandy: the period of learning from mistakes – and Monty's ideas then

In June-July 1944 two operations exemplified many of the basic problems faced by 21st Army Group in combining, or integrating armour and infantry for offensive operations. This was despite the improved balance between infantry and armour in the armoured divisions. Fontenay – although just one Normandy action like Villers-Bocage – nevertheless demonstrates many of the difficulties faced by 21st Army Group subsequently in operations to take Caen using mainly firepower-intensive and attritional pitched battle methods,

as opposed to manoeuvre-oriented ones of the kind attempted at Villers-Bocage.

Improved armour-infantry and artillery cooperation could be a solution to the problem of the enemy enjoying the possibility of long-range tank fire from well-camouflaged positions well protected by anti-tank weapons. This improvement could be facilitated by a new organisation and structure to integrate armour and infantry in action. Innovations in Normandy such as the brigade groups composed of mutually supportive infantry battalions and armoured regiments introduced by Roberts and 11th Armoured Division and the Guards Armoured Division in late July/early August 1944 would sometimes prove highly effective and successful, as will be shown.

Although new tanks were available from the start in Normandy, for example the new A27 Cromwell tank equipped all the armoured regiments of the 7th Armoured Division, Montgomery's further attempt to impose 8th Army tactical methods on 21st Army Group before D-Day was unfortunate. Nevertheless, shortcomings were quickly recognised in Normandy by many subordinate commanders on the ground – reflecting the general approach characterizing the way the British Army attempted to adjust official War Office doctrine to new challenges. Solutions drew from the general British approach to doctrine.

At the start of the North-West Europe campaign there was a confluence of conflicting battle ideas coming from Montgomery, those with desert experience, those with Home Forces experience only, edicts from the War Office, feedback from the ground up and the prevailing imbalance between armour and infantry. However, as will be shown in subsequent chapters, as the campaign progressed and the problems of fighting in Normandy became more apparent a further process would engage both Montgomery and subordinate commanders at many levels in his army group. Together they would shape a generic and ultimately successful 21st Army Group tactical doctrine. By early July, however, with the invasion forces no more than 15 miles or 24 kilometres inland at any point, much remained to be resolved.

1 J. Buckley, *British Armour in the Normandy Campaign 1944* (London: Cass, 2004), pp.11-23; C. D'Este, *Decision in Normandy: The Unwritten Story of Montgomery and the Allied Campaign*

(London: Collins, 1983), pp.162-3; Maj. L.F. Ellis, *Victory in the West, vol. I: The Battle of Normandy, vol. II: The Defeat of Germany*, History of the Second World War, UK Military Series (London: HMSO, 1962, 1968), *Victory: Normandy*, p.256; M. Hastings, *Overlord: D-Day and the Battle for Normandy* (London: M. Joseph, 1984; Pan, 1999), pp.162-3;T. Harrison Place, *Training in the British Army, 1940-1944: From Dunkirk to D-Day* (London: Frank Cass, 2000), p.154; French, *Raising Churchill's Army, 1919-45*, p.269.

2 Buckley, *British Armour, Normandy, 44*, p. 5. This author is indebted to D.F.S. Fourie, Professor Extraordinarius of the University of South Africa for this phrase, personal communication to the author, 6 May 2009.

3 Buckley, *British Armour, Normandy, 44*, p.102.

4 Barker MSS, Maj.-Gen. E.H. Barker to his wife, 5 August 1944.

5 IWM, Montgomery Papers, BLM 117/2, Montgomery to Lieut.-Gen. A.E. Nye, 28 August 1943.

6 Barker MSS, Lieut.-Gen. K.A.N. Anderson to Maj.-Gen. E.H. Barker, 30 May 1943. (Emphasis added.)

7 Buckley, *British Armour, Normandy, 44*, pp.15-16 and 78.

8 Barker MSS, Maj.-Gen. E.H. Barker to his wife, 26 June 1944.

9 C. O'M. Farrell, *Reflections 1939-45: A Scots Guards Officer in Training and War* (Edinburgh: Pentland Press, 2000), p. 75.

10 War Office, Notes from Theatres of War (NTW) No. 16, *North Africa, November 1942-May 1943*, (October 1943), Part III, Section 2, para. 4.

11 Montgomery, address at Headquarters, 21st Army Group, 13 January 1944, quoted in *Montgomery and the Battle of Normandy: A Selection from the Diaries, Correspondence and other papers of Field Marshal the Viscount Montgomery of Alamein, January to August 1944*, ed. by S. Brooks (Stroud: The History Press/Army Records Society, 2008), p. 28; Harrison Place, *Training in the British Army, 40-44*, e.g. p. 151.

12 Timothy Harrison Place, 'Tactical Doctrine and Training in the Infantry and Armoured Arms of the British Home Army, 1940-1944' (doctoral thesis, University of Leeds, 1997), p. 224.

13 Montgomery, Memorandum by Montgomery, addressed to Commander First US Army and Commander Second British Army, 14 April 1944, quoted in *Montgomery and the Battle of Normandy*, ed. by S. Brooks, p. 91.

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4

Significance of Middle-Level Command Responses to the Problems of Fighting and Defeating the German Panzers in Normandy

4.1 The importance of commanders on the spot: lessons from GOODWOOD and further responses for doctrine and organisation

The problems of fighting in Normandy displaced the supposed lessons of previous victories in North Africa – particularly the Western Desert, and also many ideas not from the Desert. In particular, the traditional British understanding of the roles of both arms of British armoured warfare needed to be reconciled with the requirements of the constantly changing operating environments of North-West Europe. The consequence of this was that much of what people thought would be valuable ceased to be so, and was discarded. Practice changed as the campaign developed. Commanders at the middle and lower levels were challenging, criticising and changing doctrine. For example, Roberts, though he had made his name as an innovative commander in the Western Desert, was not bound by his experience there. An important driver of further tactical change in Normandy, Roberts quickly identified the changes in doctrine and organisation he thought were required.

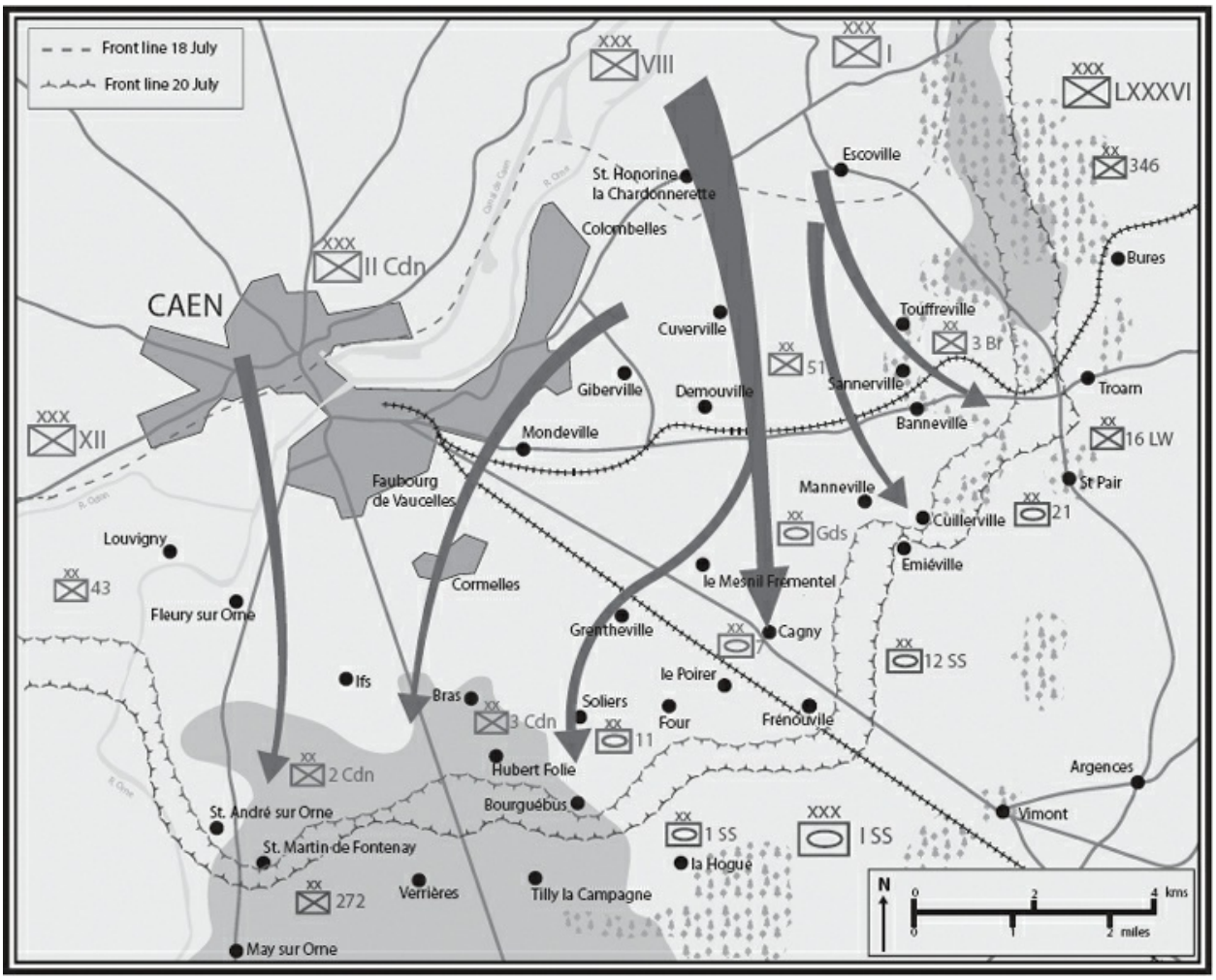
One important aspect of the process of response and change was the ‘bubble up’ of operational methods from below. A study of War Office doctrine published at the time cannot completely elucidate the operational and tactical methods utilised by Montgomery’s army group or the responses to the problems of fighting in Normandy. What people were doing was not what the doctrinal manuals or instructions necessarily said they ought to be

doing. Through ‘late Normandy’ individuals were coming up with different ideas at different levels of command. This chapter presents compelling empirical evidence for what will be seen in the next chapter to become the ‘bubbling up’ of operational methods from the below the corps level; from the divisional and brigade levels – which at this stage in the campaign can be described as being the initiation of different sets of creative responses to the same broad set of circumstances. How this was accommodated is a dimension of the experience in Normandy which historians have largely hitherto neglected. The other dimension is the development of an appropriate command philosophy (to deal with a ‘new army’ which did not yet exist but which came to the fore in Normandy). These dimensions will be dealt with in the next and subsequent chapters.

Although there was a broadly common approach to operational methods between Montgomery and his most senior commanders, there were differences of approach between them as well. Commanders at the corps and divisional levels could also differ with each other in their approaches to the problems of fighting. 21st Army Group British commanders were a group not only differentiated by rank but also by different expertise and, importantly, by different kinds of previous experience. It was at the level of command and control nearest to the actual fighting, that is, the battalion COs and brigadiers, that the process of seeking to determine the correct lessons from operations was often and widely instigated. The first level of command at which the lessons from operations began to be garnered was at this level of management, corresponding to the level of brigade commander. The role of the brigadier in what proved to be the resilient brigade-divisional-corps command structure of the army group was of considerable importance in shaping final doctrine. This was particularly true in the case of brigadiers with independent tactical commands, that is, the commanders of the independent tank and armoured brigades. Part of their role was to reconcile the expectations of the armour and the infantry as to what the other could achieve. Of course there were important high level command responses as well, and these shall be seen in the next chapter.

Throughout the fighting in Normandy in mid-1944, Montgomery’s declared overriding aim was the destruction of the enemy’s armour.[1] This

required continuous pressure, taking ground wherever possible to secure space in which to manoeuvre in order to maintain that pressure, thereby forcing the enemy to commit his armoured reserves. Whether these two sub-aims were also always part of an overall concept of operations to build up for a breakthrough by the Americans, or whether Montgomery hoped for a 'British breakthrough', is not a question that will be considered here: the important factor here is rather that whereas merely defensive success in Normandy could be enough for the German Army in the West it could not be for 21st Army Group. Montgomery's reasoning at the start of August was that, if British armoured forces could be driven 'headlong into, and through' gaps torn in the Germans' defence, it would be almost impossible for the Germans to secure a ruptured front before 'mobile war' overwhelmed their remaining forces.[2] Some armour commanders already recognised the need for a higher tempo of operations, that is, the speed with which plans were both made and carried out had to be counted in 'minutes instead of hours and half hours instead of days'.[3] There were also new (i.e. follow-on) formations and fresh equipment. To complete the picture, this chapter deals first with units and formations of VIII Corps during Operation GOODWOOD.



Map 3 Operation GOODWOOD, 18-20 July.

The first part of this chapter deals with a particular vertical slice of command charged with undertaking the GOODWOOD battle at the sharp end. It looks at on-the-ground commanders' experiences of the lack of a common British infantry combat vehicle in time for GOODWOOD and starts to address the implications this had at the tactical level for limiting the scope of 'armour-infantry cooperation'. This illustrates the dilemmas of middle and lower level commanders in providing tactical leadership during the operation – from the level of those conducting operations at the brigade and divisional levels. The course of GOODWOOD convinced many armoured and infantry commanders in armoured divisions at various different levels that tactical and organisational changes were required.

Focusing specifically on the armoured divisions and their problems reflects the important role accorded them in Operation GOODWOOD. Thereafter the

armoured divisions' commanders sought to apply the lessons of their accumulated experience in Normandy, and those of the independent armoured brigades developed the fruits of their ongoing learning in the final British 2nd Army strategic offensive in Normandy, Operation BLUECOAT.

4.2 GOODWOOD: the turning point

Back in England, in command of 11th Armoured Division for the invasion, Roberts anticipated a need for closer armour-infantry cooperation. However, he did not foresee the extent to which it would become vital. Before the invasion, he believed that, 'due to the fact that the t[an]ks can deal with A[nti-] t[an]k guns themselves, the Inf[antry] B[riga]de must be all the more on its toes and quick in order to keep up and maintain momentum'.[4]

Thus, unusually, 11th Armoured Division did practise organisation for armour-infantry cooperation in England. As the soon-to-be commander of its infantry brigade, Lieutenant-Colonel J.B. Churcher, CO, 1st Battalion of the Herefordshire Regiment, recalled: 'whilst up on the Wolds we started to develop the first armoured infantry cooperation in attack. It took quite a lot of developing because neither the junior leaders in the infantry nor the troop leaders in the armour knew how to set about the problem so it had to be worked out more or less from scratch. In the end we got the drill properly organised [in the course of] Operations on the Continent'.[5] After reaching Normandy on D+9/10, the division's motorised infantry brigade, 159th Infantry Brigade, and its armoured brigade, 29th Armoured Brigade:

> practised the organisation of armoured-infantry cooperation. To get this right it was essential that Squadron Leaders and company commanders, troop leaders and platoon commanders should know the exact drill for marrying up with armour and moving into battle. We found this time extremely useful and it was essential for our future operations.[6]

It is difficult to get away from the idea that this training was 'drill'-based, rather than based on any clear doctrine for cooperation between the two arms. Thus, although training in Yorkshire differed from early desert tactics, also – it may be inferred – it was still not quite what was right for Normandy, and had to be changed there.

The premise that the tanks could deal with enemy anti-tank guns

themselves would be shown to be incorrect in Normandy. Yet, during EPSOM (the Odon offensive) the gist of the instructions to the infantry brigade was to 'move on D plus 20 and *follow up* the advance of the armoured Brigade'.[7] As Roberts admitted, the infantry of 15th (Scottish) Infantry Division and 11th Armoured Division 'rather went their separate ways'.[8] This was also the perception of his infantry brigade commander; taking over from elements of the 15th Division, thus 'the Brigade was situated astride the Rover [sic] Odon when at that moment the Armoured Brigade decided to withdraw in toto and we were left on our own to face the music'.[9]

The upcoming GOODWOOD operation was a plan for a breakout from the bridgehead which had existed since D-Day east of the River Orne. It was an assault spearheaded on the ground by the massed tanks of the three standard British armoured divisions in Normandy, grouped in VIII Corps. I Corps was to attack at the same time and protect the left flank of VIII Corps. Thus, on 18 July, 3rd Division took part in Operation GOODWOOD, the only British infantry division to do so. Whistler, the division's commander wrote afterwards: '(T)he op[eration] started with a really terrific air bombardment followed by a race forward of the Armour'.[10] Without denying the contribution of 3rd Division to the operation, it is the 'race forward' of the armoured divisions brought together under VIII Corps, particularly of the leading division, 11th Armoured Division, that is examined most closely here. As Churcher explained, 'the 11th was to be the leading one and as it turned out I myself was the right hand leading Brigade'.[11] To take 11th Armoured Division as the example, the armoured brigade had three armoured regiments and a motor battalion, equipped with carriers and armoured half-tracks, and the infantry brigade had three infantry battalions mounted in troop carrying vehicles (TCVs) and a machine gun company.

This attempt to break out of the bridgehead was not only an epic battle but also a major operation which was a strategic offensive as well. It was not, however, an operation which was managed in a new way. Events would show difficulties on GOODWOOD that went to the heart of the problems of command, doctrine and organisation in the British armoured divisions. The GOODWOOD plan established certain kinds of objectives for the operation.

These were influenced by considerations not only that, because fresh infantry reserves would soon not readily be available, armoured divisions would do the job instead, but also that, because the ground was good open 'tank country', armour could make a very good job of it. However, this involved the armour and the infantry doing different things. Roberts, for example, suffered considerable misgivings when he learned the plan for GOODWOOD, and was critical of the fact that the armour and infantry had been given separate objectives. The objective given to 159th Brigade was to take the villages of Cuverville and Démouville, two villages immediately in front of the start line. His complaint was that he would have little infantry to clear the way for his tanks – thus showing that he was already revising his pre-invasion ideas of the way armour-infantry cooperation would operate.[12] He was so concerned about the error of this decision that he recorded his view in writing, but O'Connor did not alter the plan. Unbeknown to Roberts, however, O'Connor's original instructions to his chief of staff had stated that the 'task of 11 Arm[oure]d Div[ision], [is] to seize the villages of CUVERVILLE and DEMOUVILLE, getting their armour through simultaneously'.[13] Thus, O'Connor's original concept of operations, which differed from the plan that was finally adopted, shows he well understood the need to have infantry and armour co-operate more closely together. In fact, O'Connor wanted them to have armoured vehicles in which they could be carried forward across this unusually open battlefield and keep as close up with the advancing armour as possible, and 'must have also been extremely aggravated by Dempsey's refusal to let him use armoured gun carriers as infantry personnel carriers'.[14] From an infantry perspective, as expressed by Lieutenant-Colonel G.R. Turner Cain, Churcher's successor as CO of the Herefords, was the:

> smaller picture as seen with the Inf[antry] B[attalio]n on its feet. At this stage we had no A[rmoured] P[ersonnel C[arrier]s and if we had to get out of our Troop Carrying Vehicles (3-tonners fitted with seats) we were on our feet. We were not yet closely and intimately associated with our Arm[oure]d Reg[imen]ts., they were still Desert War minded [sic] and saw themselves galloping forward at tank speed leaving their Infantry to mop up and catch up as best they could.[15]

Thus, in addition to the lack of a practical means to 'keep up', there was an

expectation among the infantry that the tanks would move forward because this was the fashion in which they had advanced in the desert, and because they had in the past been given orders to do this in Normandy.

The perception of the importance of the job of the infantry brigade commander can be gained from the following comments: ‘Jack (Churcher) has gone up one. He is a most wonderful leader and in no small way responsible for giving the Bosche [sic] a continuous bloody nose right across the Brigade front’.[16] This must, however, be interpreted through Roberts’ assessment of Churcher, where Roberts had to consider Churcher’s influence on the performance of the whole division:

> Jack Churcher proved to be meticulous in his planning of operations, such as crossing a river and forming a bridgehead on the other side, in fact at anything set-piece. He was not so good in a fluid battle, but the troops under him felt that he looked after them and the brigade itself went well. The most difficult problem was that those outside his brigade did not always see eye to eye with him, in particular the commander of the armoured brigade, Roscoe Harvey, and I often had to act as mediator.[17]

Thus, a factor influencing how the plan was carried out was that the two brigade commanders did not always see ‘eye-to-eye’, leading to a lack of understanding between the two brigade commanders, of which Roberts was aware. In Churcher’s narrative: ‘there was considerable return fire from the Germans but we managed to advance and continue the advance all day [18 July] till eventually we reached the area of Le Mesnil Frementel where we found that the armoured brigade had come to a halt and the whole Divisional attack had not yet got beyond the approximate line of the railway line running eastward from Caen’.[18] Thus, by the time on the evening of 18 July when Robert’s infantry had reached a position near Le Mesnil Frémentel where they were not far behind the armour, it was clear that the armoured advance had come to a halt, with gains far short of expectations. That the armoured and infantry brigades would initially have to fight separate battles was, of course, expected. What was not planned for was the difficult situation experienced by the armour in dealing with the German strong points, gun positions further back and anti-tank guns on their flanks as well as German counter-attacks with tanks. These difficulties were exacerbated by traffic congestion in the bridgehead, which delayed the other armoured divisions

from getting forward and allowing all the armoured divisions to operate more or less together and simultaneously. From below, as Roberts' recognised, Churcher inspired confidence – such commanders are likely to get tasks done. However, it can be inferred from Roberts' comments after the war (in his memoir, which, coming after his interview at Staff College in 1979, may be held to be his final mature reflection on the subject) that he thought Churcher was unable to respond to situations spontaneously, in particular to the really difficult situation in which the armoured brigade found themselves on 18 July, even though it was not his fault:

> Cuverville was cleared by 1015 hours, but when this was reported to Corps, the corps commander ordered that it was to be held by the regiment that had cleared it until relieved […]. I think that, having heard of this order I should have got hold of Brigadier Churcher on the radio, and instructed him either to use the reserve battalion (4th KSLI) or the Herefords who were in the woods on the left to take on the task of capturing Démouville.[19]

On the 19th July, although GOODWOOD would not be terminated for another day, the division 'moved more cautiously'.[20] The three infantry regiments of 159th Brigade were now available. As Churcher put it:

> 159 Brigade was asked to attack on the west side of the railway line and capture the villages of Bras and Hubert Folie. … [C]areful plans were laid on for the armour to support them onto their objective. This was successfully achieved … Meanwhile the Armoured Brigade had tried to continue their advance with no success….I was told to remain on the ground while the Armoured Brigade was withdrawn for refitting.[21]

On the day 11th Armoured moved back across the Orne, Turner Cain mused that: 'providing the Hun continues to fight us with his present intensity, and we continue to destroy him, it does not seem to matter how little distance we actually advance'.[22] However, Montgomery's strategy was not just about attrition, or static warfare. GOODWOOD was intended to make ground to secure the space in which to manoeuvre in order to maintain pressure on the Germans and prevent them disengaging their panzer divisions and being able to have in hand a strategic armoured reserve. Thus, while Turner Cain can be said to have had part of the final answer – that is Montgomery's wish to engage enemy armour and 'write it down' – his somewhat static means of doing was neither providing the tempo required nor making the most of the armour's ability. The main problem lay in the

apparent lack of armoured warfare-mindedness on the part of the infantry commanders. This was the lack of initiative to be proactive which would, as this study will show, become the hallmark of all successful armoured commanders. That this ran deep in the infantry and was actually there is substantiated in the quotes from Turner Cain.

Having looked at the consequences for the tanks of the lack of infantry it is also necessary to look at the consequences for the infantry of having some tanks. Putting 2nd Northamptonshire Yeomanry (2nd Northants Yeo) under command of 159th Brigade was intended to help the infantry to take the two villages, Cuverville and Démouville, as Roberts explained:

> I thought it might hurry things up a bit if I gave 159th Brigade some armour to support them. So I put the 2nd Northants Yeomanry under their command…. [T]hey were trained as the divisional reconnaissance regiment and equipped with Cromwell tanks, but …I felt they would be of some help. In view of the tremendous hammering these two villages would have received from the air and from artillery concentrations, I thought they could be dealt with fairly quickly. Consequently, I concentrated my attention on the armoured brigade's advance.[23]

How this actually worked out on the ground is related by Turner Cain, CO Herefords, 159th Brigade:

> The villages were only about 1km apart and offered good protection and concealment for enemy A/Tk guns with their Inf[antry] support. Additionally there were farmsteads with their own fringe of trees every 500m….So our education at the hands of the enemy began….Their fire pinned us down in the open until we had worked a platoon or a company into position to carry out an attack supported by the odd Northants Yeomanry tank. It meant very slow progress with the gap between our Arm[oure]d B[riga]de and ourselves opening all the time.

This was until 'we were told to get a b----y move on and to catch up with our tanks'.[24]

Roberts 'giving' of armour to the infantry apparently did not 'hurry things up' at all, and the reason for this was a lack of proper training on the part of the armoured reconnaissance regiment that he gave them. However, while this deprived the armoured brigade of its armoured reconnaissance regiment, a further important technical issue could be resolved which did not require new equipment, which was that armoured reconnaissance did not especially require the Cromwell because the Sherman was essentially of equivalent performance in this theatre. Yet, there was more than one reason for

depriving the armoured brigade of its armoured reconnaissance regiment. Once the decision had been taken to abandon their reconnaissance role, the way was clear for the armoured and infantry brigades to set up new structures and a new organisation.

But providing the infantry with untrained armour did not help them, while depriving the armour of infantry support resulted in great tank losses. When Roberts tried – or was forced to try – to fight the battle with great weight of armour unsupported by infantry from the infantry brigade, this did not solve the problem of dealing with the enemy anti-tank guns: 'there were so many 88s around and about the various villages that they were all inter-supporting with their long effective range and we were quite unable to advance without the guns on the flanks being neutralised'.[25]

The lesson of GOODWOOD as seen by Turner Cain was that:

> releasing Arm[oure]d Reg[imen]ts to operate on their own with only light Inf[antry] protection (8RB in 29 Armd Bde) had been finally learned on the Caen-Bourgebous ridge. […] The Tanks realised that for their close protection Infantry had to be with them at all stages of an attack or advance. The Armour could not afford to wait for Infantry who, embussed in Troop Carrying Vehicles completely unarmoured, were a mile or more behind and had to disembus and move up on their feet. […] The solution to close co-operation in 11 Arm[oure]d Div[ision] when Infantry and tanks operated together in Squadron and Company groups, was to mount the Infantry on the outside of the tank and to travel as such until it was essential for the Infantry to get off and operate on their feet to protect the tanks or clear the enemy from dugouts.[26]

Afterwards, Roberts recognised further flaws in the plan: 'the real set-back was the enemy gun position along the Bourguebus ridge …. These were scarcely touched by the bombing and were out of range of the majority of the Corps artillery which was on the west side of the River Orne'.[27] As Turner Cain put it: 'with the German A/Tk defence in great depth it is not easy to know when you are through their defences as there always seem to be more A/Tk guns further back to take toll of our guns [i.e. tanks]'.[28] In other words, the layered German line of resistance, consisting of both fixed and mobile anti-tank defences, extended much further back than anyone had really allowed for.

However, GOODWOOD set Roberts thinking. Further organisational changes were required to make closer the cooperation between the armour

and the infantry. Thus, by the time of Operation BLUECOAT the armoured regiments and infantry battalions of 11th Armoured Division were already co-operating on a troop/platoon basis. However, it had to go up the command ladder as well, and take in the two brigadiers in charge of each brigade. Their job would not be cooperation, so much as coordination of armour, infantry, artillery and tanks for and in the attack. This was an ad hoc, flexible organisation, not a permanent establishment, dictated by the situation 'on the ground' and responsibility devolved to either brigadier on the ground. This did not mean a defensive operational strategy would not sometimes be appropriate. However the potential was there for a different kind of offensive action when the time was right because everyone now knew what to do.

4.3 BLUECOAT: operational development, innovation and command

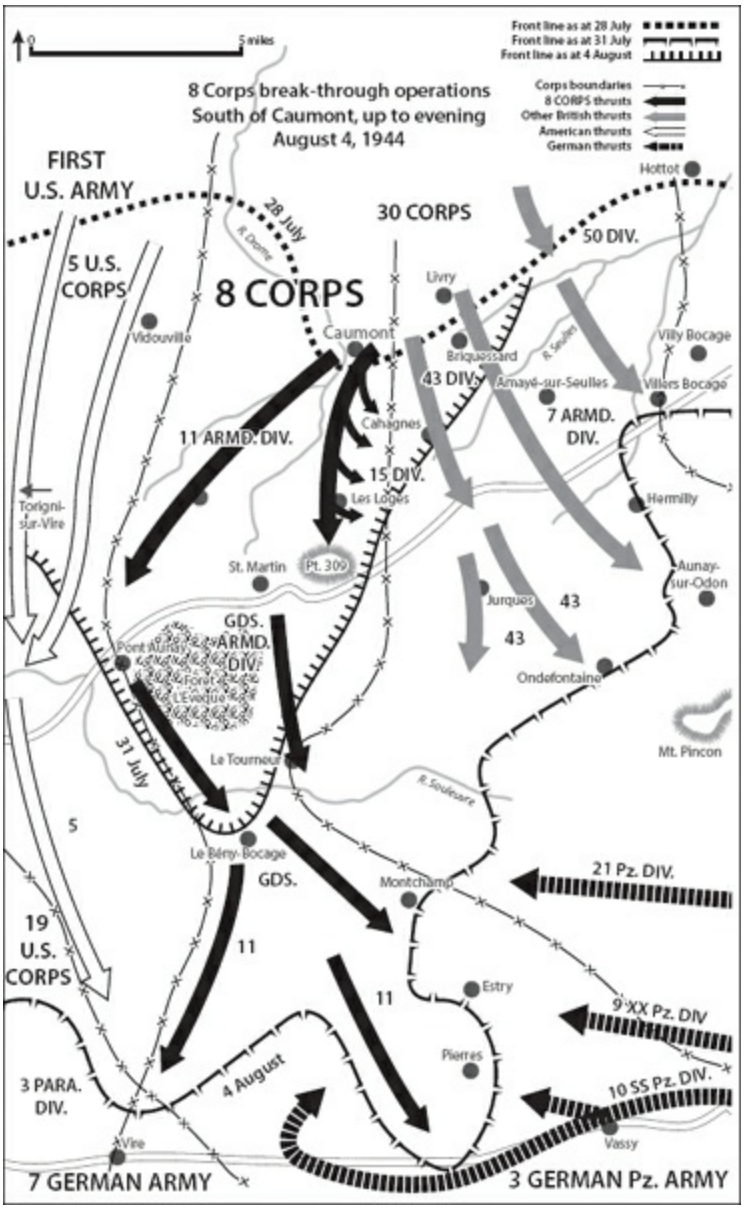
The adjutant of an infantry regiment correctly reflected on the earlier part of the campaign that, particularly when it involved moving away from official War Office doctrine, 'nobody would learn from the experiences of others' who were in contact with the enemy.[29] In Normandy, for example, it was already coming to be believed that the Churchill tank's cross-country ability had to be used to get into positions where it could not easily be seen in order to close the gap between the superior performance of the German tank and anti-tank guns and the Churchill's own armament.[30] Despite Peace's observation above, from the rank of Captain, some middle-level commanders were quickly becoming open to learning from ongoing experience. Brigadier G.L. Verney, who commanded 6th Guards Tank Brigade, saw the value of learning lessons – 'the idea' [that an officer go to Normandy as an observer of tank fighting] came from, I believe, our Brig[adier] Verney and he must have persuaded Commander 30 Corps Gen[eral] Bucknall', Major C. O'M. Farrell, who was thus selected, recalled.[31] Verney sent Farrell to report to 6th Guards Tank Brigade before the brigade embarked for Normandy. Farrell tried to convey the newly emerging conclusions in separate talks to the other officers of the 6th Guards Tank Brigade's three battalions. In them he tried to put across the need to forget at all costs their training based on manoeuvres on Salisbury Plain and the Yorkshire moors, itself drawn from Western

Desert tactics. Armour-infantry tactical cooperation depended, in Farrell's asseveration many years later, on the human networking and common agreements and understandings of tactical procedures between the officers of the armour and infantry units.[32] 'Nearly all the fighting', he explained, 'was at Squadron level – detached to an infantry brigade'.[33] However, as a result of 6th Guards Tank Brigade's initiation into combat in support of the 15th (Scottish Division), with whom they had trained intensively, during the Caumont battle as part of Operation BLUECOAT (30 July-8 August 1944) it became apparent that indeed what was required was that tanks and infantry cooperate symbiotically to best effect rather than necessarily closely on the battlefield. BLUECOAT involved a British thrust south from Caumont, intended to increase pressure on the Germans and prevent them from transferring armour against the Americans (see Map 4).

'It seemed that the only hope was to take a chance and push on alone, and follow up with infantry later as best we could,' Verney later recalled, referring to the activities of 6th Guards Tank Brigade at Caumont.[34] Verney was referring here to Phase Three of the operation. On another occasion he explained that during the second phase 'first the [4th Tank Battalion] C[oldstream] G[uards] CO and then the S[cots]G[uards] CO called me up on the RT and asked if they were to stay with the Inf[antry] or go on close to the Barrage'.[35] This latter manoeuvre, in which Verney was willing to implement ideas that had come to be accepted in 6th Guards Tank Brigade as the right ones, was, when viewed purely from the point of view of the published War Office pamphlets, 'highly unorthodox'.[36] This demonstrates not only the substantive content of 6th Guards Tank Brigade's learning in the early part of the campaign but something of the on-the-spot decision-making involved as well. The 6th Guards Tank Brigade did not abandon their task of tank-infantry cooperation. The tanks were pushed on ahead of the infantry but they were not out of touch.

They were still cooperating with the infantry but in a different way than the 'textbook' suggested. Thus, although the CO of the 3rd Tank Scots Guards asked to press on without the infantry, this was because he believed 'the infantry was not now meeting serious opposition'.[37] Nor was there a feeling among the tanks that the infantry was not required, indeed 'the battle would

not have been a success if they had not been determined to fight their way up to us'.[38]



Map 4 Operation BLUECOAT based on that appearing in *Jackson's Eighth Corps: Normandy to Rhine* (1948), p. 117.

Plate 6 Major-General A.H.S. Adair, GOC Guards Armoured Division, salutes from his tank during the Liberation of Brussels, on 4 September 1944. The tank is a command tank version of the Cromwell. A Cromwell command tank had its 75mm gun replaced with a dummy, and two powerful radios installed in the now-empty turret (photo Tank Museum 7450-F2: reproduced by kind permission of the Tank Museum, Bovington, Dorset).

The innovation in late July 1944 of brigade groups composed of mutually supportive infantry battalions and armoured regiments of armoured divisions was particularly associated with Major-General A.H.S. Adair of the Guards Armoured Division and Roberts of 11th Armoured Division. However, while the practice of cooperation was improving, unit organisation and structure still left much to be desired in mid-August. In the case of the Guards Armoured Division with their particularly exclusive regimental traditions, the idea of cooperation between the different arms of infantry and 'cavalry' was 'revolutionary'.[39] According to Lieutenant R.T. Boscawen, a Troop Leader who commanded a Sherman tank in the 3rd Irish Guards/1st Armoured Coldstream Guards group, Guards Armoured Division during Operation GROUSE (10-13 August 1944): 'there was no real plan except just keep behind the infantry. I had fully expected the battle to go like this'.[40] The

Guards Armoured was a Sherman-equipped armoured division, and as Captain the Earl of Rosse, serving with the Guards Armoured Division's 32nd Brigade Headquarters, put it: 'it was felt that the Guards Armoured needed some strengthening. Consequently the 3rd Scots Guards with their Churchills were put in support of us, and gave invaluable assistance in the small but difficult operation which culminated in the capture of the village of LE BAS PERRIER by the 5th Coldstream and 1st Welsh'.[41] At Chênedollé and Le Haut Perrier the role of 3rd Tank Scots Guards' 'S' Squadron (Maj. Farrell) was to support two companies of 1st Battalion Welsh Guards (an infantry battalion of the Guards Armoured Division) in their attack on Le Bas Perrier, then to support 5th Battalion Coldstream Guards (another infantry battalion of that division) to a further exploitation to dominate the line of the Vire-Chênedollé-Vassy road, which appears at the bottom of Jackson's map (Map 4). At Chênedollé 6th Guards Tank Brigade did not operate with 15th Infantry Division; the Welsh Guards had not been trained in armour-infantry cooperation let alone with 6th Guards Tank Brigade.[42] However, the attack succeeded when Chênedollé was reached in the evening of 11 August, the Churchills of 'S' Squadron having progressed in line in front of the infantry to protect them.[43] Farrell's contention, therefore, that 6th Guards Tank Brigade (independent as opposed to the Guards Armoured Division or any other armoured division) did not have to push for this integration – 'we [i.e. 6th GTB] already had it with 15 Scot[ish] Div[ision] and anyone else who we supported' – would appear to have some substance to it.[44] It is helpful at this point to consider some of the possible reasons for this assertion.

It will be recalled that the 'separate' armour and infantry brigades notion was allowed to find its way into Normandy, having been taught before D-Day as a universal armour-infantry technique to 21st Army Group in England preparing for the invasion. The infantry and the armour in an armoured division were separate. It will be remembered that the infantry brigade had three infantry battalions mounted in lorries and a machine gun company and the armoured brigade had three armoured regiments and a motor battalion, equipped with carriers and armoured half-tracks. Thus, both had the 'triangular' structure or organisation with which the British armoured divisions started the campaign. However, as the example of Roberts and 11th

Armoured Division makes clear, throughout the war the tactics used within an armoured division and its organisation were continually changing. While Roberts had earlier perceived a need for closer armour-infantry cooperation, the way it would work out in practice, the particular reasons for the need for it, and the ramifications for unit organisation and structure would not be those which he had foreseen. These highlighted wider shortcomings in the way battles were fought during the EPSOM offensive. This was unsatisfactory, particularly after his corps commander, O'Connor, had made it clear that 'you may find that for a period you may be forced to do the work more properly allotted to an [independent] Armoured Brigade'.[45] This was the same problem Erskine had been faced with less than a month before. Hinde had also identified the problem with respect to 7th Armoured Division. The problem being threefold: the need for more infantry, difficulties caused by lack of training with the infantry, and the difficulty encountered in fixing the locations of German anti-tank guns: in short, the close country called for infantry supported by the tanks of the independent tank and armoured brigades, not for the tanks and infantry associated in the armoured brigade of an armoured division, which were better suited to exploitation.

The role of an independent armoured brigade charged primarily with infantry close-support did not greatly appeal to Roberts, just as it did not appeal to Erskine and Hinde, as it seemed to rob the armoured division of the opportunity for exploitation. At that point, early in July, however, Roberts continued to think that 'with closer co-operation between the infantry and the armour, we might get along reasonably well'.[46] Operation GOODWOOD in mid-July was the turning point. Roberts thought that it was not until Operation BLUECOAT in late July/early August that the organisation of the division was got right, and that was an organisation of complete flexibility which at the shortest possible notice could be altered from an armoured brigade and an infantry brigade to two mixed brigades, each of two armoured regiments and two infantry battalions (see Figures 1 and 2).

The armoured regiments and infantry battalions of 11th Armoured Division already cooperated on a troop/platoon basis. This was standard cooperation procedure for minor tactics in the attack, practised to a greater or lesser extent and in broadly similar ways in all the armoured divisions, as

Roberts later acknowledged.[47]

Nevertheless, when O'Connor then directed Roberts that he must be prepared for the very closest of tank-infantry cooperation on a troop/platoon basis Roberts recognised the order as a seal of approval on the organisation he had already set in place.[48] This new type of tactical formation, which Roberts christened 'homogeneous brigades', embodied the principle of tactical cooperation in a way its author thought most appropriate in the light of 11th Armoured Division's experience in Normandy.[49] Roberts's homogeneous brigade groups also embodied beneficial insights that related to the principal of the economy of force. As British tactical doctrine made clear, application of the principle of the economy of force – and concentration of superior force at the decisive time and place – required a proper appreciation of the balance between offence and defence. For offence and defence we can substitute 'tank' and 'anti-tank'. What Roberts had set in place was an organisational development, a type of force structure designed to facilitate the combined arms tactics necessary for success in the *bocage* and bocage-like countryside of Normandy. The triangular armoured and infantry brigade-structure that permitted for example, two armoured regiments or infantry battalions 'up, one in support' was changed to one similar to what is known in modern military parlance as a 'square' configuration – a mutually-reinforcing one of one armoured regiment and one infantry battalion. Finally, while it is incorrect to say that 6th Guards Tank Brigade acted during BLUECOAT more in the manner of an armoured brigade of an armoured division, it can properly be said that from BLUECOAT onwards 11th Armoured Division was equally capable of both infantry-support and exploitation.

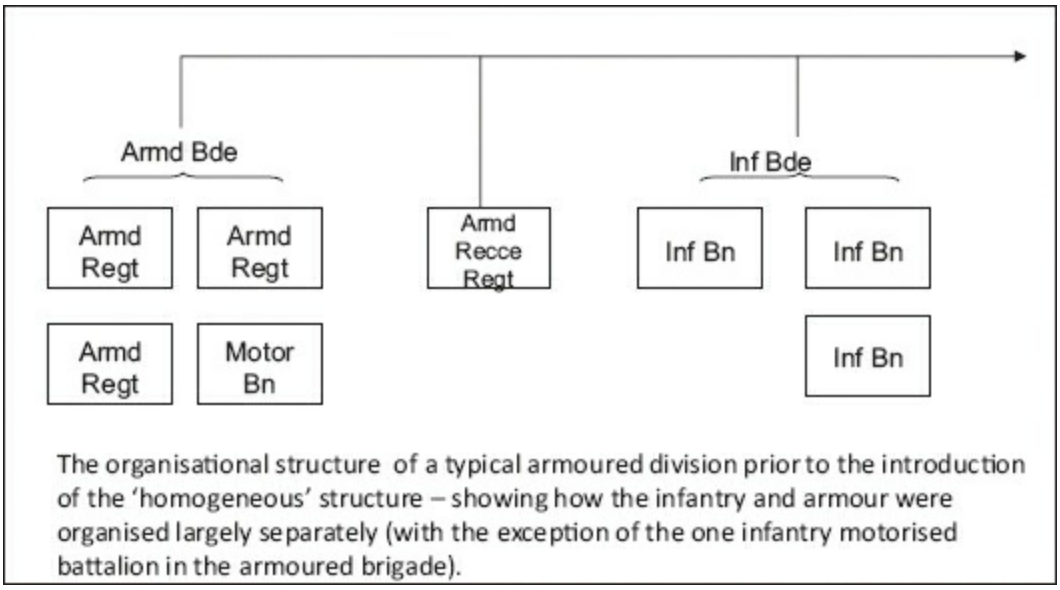

Armd Bde
Inf Bde
Armd Regt
Armd Regt
Armd Recce Regt
Inf Bn
Inf Bn
Armd Regt
Motor Bn
Inf Bn
The organisational structure of a typical armoured division prior to the introduction of the 'homogeneous' structure – showing how the infantry and armour were organised largely separately (with the exception of the one infantry motorised battalion in the armoured brigade).

Figure 1 The 'old' or standard organisational structure

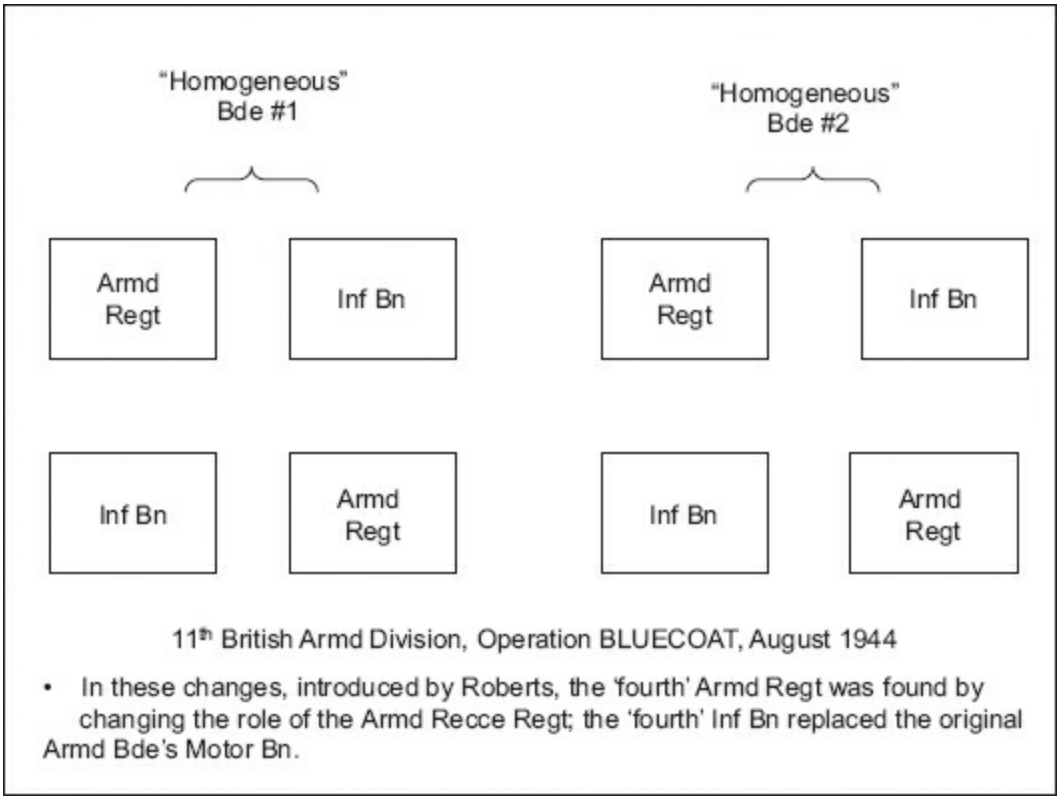

"Homogeneous" Bde #1
"Homogeneous" Bde #2
Armd Regt
Inf Bn
Armd Regt
Inf Bn
Inf Bn
Armd Regt
Inf Bn
Armd Regt
11th British Armd Division, Operation BLUECOAT, August 1944
• In these changes, introduced by Roberts, the 'fourth' Armd Regt was found by changing the role of the Armd Recce Regt; the 'fourth' Inf Bn replaced the original Armd Bde's Motor Bn.

Figure 2 The 'new' or emergent organisational structure

The Guards Armoured Division, newly arrived in the Caumont area for BLUECOAT, would, O'Connor assumed, be able to emulate the flexibility of the other armoured division in VIII Corps. Adair, recognizing that the Guards

Armoured's tanks might indeed have to fight in the *bocage*, had already begun to contemplate the need for 'a system whereby the infantry was always right up with them'.[50] Rosse and Hill state that 'experience gained [in BLUECOAT – the Caumont offensive] led us to adopt a different organisation from any that we had ever practised; during the years of training we had found increasingly that under European conditions, as opposed to those of the desert, tanks and infantry needed to work in close co-operation down to the lowest level'.[51] However, an account by Rosse written contemporaneously with events must be interpreted as implying that they were trained in one way in the UK prior to Normandy, which did not equip them with the right organisation or an understanding of the organisation which would have worked, and that thus, when they got to Europe it differed from both desert and training.[52] There is little doubt that the Guards also had some success with their new structure during the closing stages of the Normandy campaign. It was not until after the fighting in Normandy, however, that 'it was considered that each brigade should control an equal proportion of infantry and armour'.[53] In this instance the earlier of the two versions is followed as it appears to throw new light on why the Guards Armoured Division did not adopt the same organisation as 11th Armoured Division at once.

Plate 7 Brigadier R.M.P. Carver at Aschenberg, Schleswig-Holstein, on a mount (probably Marshal) supplied by a German remount depot at Neumunster, after V-E Day. Important things to note are his obvious youth and air of apparent confidence (at the age of 29, he became the army's youngest brigadier when he was given command of 4th Armoured Brigade). Also to note is the 'Black Rat' jerboa shoulder patch of 4th Armoured Brigade (photo NAM 1975-03-63-24-73: reproduced courtesy of the Council of the National Army Museum, London).

The Churchill-equipped fighting regiments in Normandy were mainly supplied with Mk IVs and Mk VIs. However, the availability within 6th Guards Tank Brigade of Mk VII and VIII models, the so-called 'heavy Churchill' with maximum armour thickness increased, meant the 'survivability' of these tanks was greater than the Sherman tanks of the Guards Armoured Division. Three quarters of 1st Armoured Coldstreams' Shermans were lost during GROUSE in an area defended by numerous anti-tank guns and several tanks. This serves as a reminder that equipment, as well as doctrine, training and organisation, has to be taken into consideration in explaining failure or success. As Rosse, serving with Guards Armoured,

reflected at the time: ‘this type of operation, against dug-in enemy with tanks and anti-tank guns, is impossible for the Shermans with their thin armour to compete with, and we were tremendously impressed by the performance of the Churchills’.[54]

Turning now to the independent armoured brigades later in the Normandy campaign, developing the fruits of their earlier learning, over and above these questions of organisation and equipment there was a lesson that had been learned about cooperation between all arms. As 4th Armoured Brigade’s Brigadier, R.M.P. Carver, expressed it: ‘whereas I found that my lack of previous direct personal experience of tank-versus-tank fighting in the desert was no handicap to me, it was clear that the greater knowledge I had of the characteristics of other arms, derived from my experiences on divisional and corps staffs, stood me, my regiment and my supporting infantry, gunners and sappers in good stead’.[55] This supports the view that to some extent the key to success in integrated tactics was not what you knew but who you knew how to work with. Nevertheless, in Normandy, Carver was also faced with new problems of combat, which were linked to further equipment and organisation issues and how best to utilise the forces he had at his disposal. As a result of experience fighting in Sicily during the Italian campaign, Carver appreciated that:

> speed [i.e. the ‘mobility’ of mobile warfare] is not attained so much by actual m.p.h. as by […] above all a spirit in all ranks that every minute is vital if the war is to be won in time and that there is always a way of solving every problem if you are determined to do so. … It is just as necessary to make a plan to combine fire and movement with tanks as it is with infantry. *The big difference is the speed with which the plan is both made and carried out.*[56]

At the beginning of July 1944, 4th Armoured Brigade was part of VIII Corps, engaged in close support and counter-attacking in defence of VIII Corps’ salient. In early July Carver identified the problem of creating an effective anti-tank defence where ‘a[nti-] t[an]k guns or tank pos[itio]ns 1000-3000yds on the flanks which are the real menace to tanks accompanying the infantry’ had not been effectively dealt with and then when the enemy counter-attacked British defences the British tanks had to ‘rush up in a hurry, knowing next to nothing of what is going on’ and also the conditions for further action by the armour, that is that tanks would not get

shot up by enemy anti-tank guns from the rear as they went forward.[57]

During Operation JUPITER (10-11 July 1944) to extend the VIII Corps bridge-head over the Odon towards the Orne, the 'exploitation' role was to be undertaken by 4th Armoured Brigade, for the first time. Second in command of 44th Battalion Royal Tank Regiment (44th RTR), 4th Armoured Brigade was Major R. Leakey, an outstanding commander whose first-hand account (reproduced here unexpurgated) serves to put the problem identified by Carver in its context within JUPITER:

> It was towards the middle of July that we had our worst spell. It started with an attack against a hill called Point 112 in which we were supporting an infantry Brigade. Although the attack was successful, the Germans counter-attacked, and retook the vital hill. By this time the infantry and ourselves were so reduced in numbers and so tired that it was all we could do to take the lower slopes.[58]

On 10 July, Carver fought for and secured assurances of ample medium and heavy artillery support '[Major-General G.I.] Thomas [GOC 43rd Infantry Division] having tried to fob me off with smoke screens'. Smoke screens were regarded as one of the quickest and most economical ways of achieving results. Carver also insisted that Thomas's infantry and the Churchill tanks of 31st Tank Brigade should clear and secure the wood on the reverse slope of Hill 112 before he would launch 4th Armoured Brigade, led by the Scots Greys' Shermans and 2nd Battalion King's Royal Rifle Corps (2nd KRRC) to take the village of Maltot beyond the hill.[59] In the event, the infantry and their supporting tanks suffered considerable losses.

In addition, 2nd KRRC and a battery of self-propelled guns from 91st Anti-Tank regiment, under command 4th Armoured Brigade, failed to eliminate the threat from the flanks posed by the enemy's anti-tank guns. The Greys too, lost a considerable number of tanks, although the self-propelled guns of 144th Anti-Tank Battery (144th SP A/T Bty) helped their Shermans knock out two German Panther tanks. On 11 July the Greys with 5th Battalion Duke of Cornwall's Light Infantry from 43rd Infantry Division succeeded in reaching Hill 112. They were nevertheless ordered to withdraw in the evening because of losses of men and tanks, despite the Greys with the assistance of the self-propelled anti-tank guns successfully destroying four German self-propelled anti-tank guns.[60] Experience in the Italian campaign,

Carver believed, showed that the advantages associated with the Sherman's capability to fire 75mm HE – which had provided British armour with sufficient firepower to prevail in the open operating environment of the desert in the manner envisaged by the War Office – could be substantially offset when close, congested country constituted the operating environment 'as few targets were seen and the shells exploded on contact with the nearest tree or bush'. Further, Carver believed 'such targets [tanks or anti-tank guns in forest cover] were never accurately located and could not be seen from the tank'. Rather, he thought, they were dealt with more accurately and more effectively by concentrations from the supporting artillery, with no loss of speed. Fire from tanks could not cover the area nor produce the concentration needed.[61] An additionally important point is the distinction Carver drew between supporting the attack by the infantry of 43rd and 15th Infantry Divisions and the direct support of the infantry: 31st Tank Brigade did most of the direct support of the infantry. This is an example of the further emergence of appropriate tactics for the Shermans in the infantry-support role.

The utilisation of self-propelled anti-tank guns is interesting here because they were initially in short supply in 21st Army Group, and, in fact, there was only one weapon, the American M10 (also known as the Wolverine). Many M10s were adapted, like the American Sherman tank, to take the British 17-pdr anti-tank gun, the extraordinarily potent weapon which, in 1943 replaced the 6-pdr as the main British anti-tank gun.[62] In this form they were known as the 17-pdr SP gun 'Achilles'. They equipped 144th SP A/T Bty. The M10 'Wolverine' and Achilles were mainly issued to anti-tank units in armoured divisions at this time. Due to their relative scarcity initially, they were operated by members of the Royal Artillery before D-Day and throughout the fighting in North-West Europe. While it was recognised that the self-propelled 17-pdr was not so effective an answer as the only satisfactory answer in tanks, the Sherman Firefly, nevertheless 'Second Army was compelled to reckon in every 17-pr to redress the balance'.[63] The 17-pdrs had proved their worth and were being utilised well in the operations at the beginning of July, for example assisting the tanks to restore infantry positions which were being over-run by tanks. One of the reasons for failure on

JUPITER did not lie with the weapon itself but with those responsible for tactical leadership, who had failed to utilise its full potential offensively. This became apparent to Carver. ‘If we all start thinking hard and pool our ideas,’ Carver suggested in his appreciation of German defence methods of 25 July 1944, ‘we shall outwit the enemy’.[64]

The key problem remained that of converting an initial break into the enemy’s defensive system into a breakthrough. The British Army distinguished clearly between consolidating the gains made as the basis for further offensive action, and exploitation – a subsequent action which might or might not be decided upon depending on whether troops and firepower were readily available for this task. Carver identified key weaknesses in implementing this doctrine. He appreciated that ‘if our tanks succeed in penetrating his [the enemy’s] main A[nti-] t[an]k defence, he relies on bringing further progress to a halt by cutting off the tanks from their soft stuff, guns and supporting infantry’.[65]

The armoured and infantry brigade COs offered different answers to the problem of how the process of defending against enemy tanks could be made dynamic so that defence itself became mobile rather than static.[66] If anti-tank protection was the ‘framework of defence’ as official British 1943 doctrine had it – and all were agreed that it was – then in the words of Lieutenant-Colonel A.A. Cameron of the 3rd County of London Yeomanry ‘to knock out enemy tanks in general terms needs the 17 pr gun’. This, however, left aside or sidestepped the important question of whether the anti-tank gun was primarily an armour or an infantry weapon. Proceeding from the above point of agreement, however, Lieutenant-Colonel G.P. Hopkinson, commanding 44th RTR recommended that ‘the infantry should be accompanied in their attack by S[elf-] P[ropelled] A[nti-] t[an]k Art[iller]y which in our opinion should be an infantry as well as an Arm[oure]d Div weapon. The early introduction of HE will also produce for the Inf[antry] their own Inf close support gun’. The CO of 2nd KRRC Lieutenant-Colonel R.B. Littledale’s preferred solution was for ‘anti-tank fire to be provided by tanks or SP anti-tank guns, until infantry weapons [towed 17-pdrs] are dug in’. Hopkinson, therefore, wanted the infantry to be able to look after their own protection, leaving the armour free for what was, in effect, the armoured division’s role

of exploitation. From an infantryman's perspective, Littledale not unnaturally wanted to keep the protection of the tanks.

Within 4th Armoured Brigade it had 'become abundantly clear in recent operations that the only anti-tank weapon in which all arms and particularly the infantry have full confidence is the 17 pr on a tracked chassis whether it is called a tank or a SP anti-tank gun.'[67] In other words, the Sherman Firefly, armed with the 17-pdr gun or the British-modified M10 Achilles, also armed with the 17-pdr, were the only weapons in which the infantry had complete confidence. Normally, the main target of an anti-tank gun was indeed the tank although the 17-pdr did latterly fire a useful HE shell, and was therefore also effective as a field gun. The general teaching was that tanks which had led or supported the advance to an objective should be relieved there as soon as possible by self-propelled anti-tank guns, which should in their turn be relieved by towed anti-tank guns dug in. This reflected the doctrine intended to govern the employment of self-propelled anti-tank artillery as laid down in the 1943 War Office Military Training Pamphlet No.41 *The Tactical Handling of the Armoured Division and its Components,* in force throughout the fighting in Normandy: that 'the light armour provided, together with good cross-country performance, make such guns suitable for employment in support of the attacking brigade, especially for consolidation, and as a mobile reserve'.[68]

This was not helpful because of the distinction made between consolidation and exploitation. Carver's criticism of the sequencing outlined was that it had seldom been possible or effective because there simply were not enough self-propelled 17-pdrs to relieve the tanks, it was seldom possible to bring up towed anti-tank guns and dig them in in daylight, and it was very difficult to site towed anti-tank guns so that they were both concealed and able to cover the ground in front of and on flanks. Even when dug in, however, the towed 17-pdr was very vulnerable to HE fire. This all added up to one thing, Carver noted: 'under present conditions effective anti-tank defence of the infantry's forward positions can NOT be provided by anything else but tanks or SP guns equipped with the 17 pr', that is, in practice, the Sherman Firefly or the Achilles, and Carver found himself 'forced to use up tanks for the anti-tank defence of static positions for lack of SP anti-tank

guns'.[69] Therefore, he thought the War Office doctrine was wrong.

The conclusions Carver drew from all this were firstly – as Hopkinson, the commander of 44th RTR had suggested – that anti-tank regiments of infantry divisions should be equipped with self-propelled guns.[70] Carver went out of his way to accommodate the demands of Littledale, the infantry commander of 2nd KRRC, by stressing that the tanks would continue to defend the infantry from enemy tanks in the absence of an adequate number of self-propelled guns until the number and quality such guns could be increased, in spite of the wastage in very valuable tank commanders which it imposed as a result of casualties from mortar and HE fire.[71] Secondly, self-propelled anti-tank gunners must get out of their heads the idea that their true role was as a mobile reserve as per War Office teaching, and that anti-tank protection of forward defence lines was the job of the towed gun.[72] The tanks, in other words, were best trained and equipped to provide the mobile reserve, and what self-propelled anti-tank guns there were should be used to release as many tanks as possible for this job. Thus, instead of being used in an offensive mobile role operating in support of friendly tanks chasing and eliminating enemy tanks, the self-propelled anti-tank gun's tactical role according to Carver should be flank protection and reinforcement of the anti-tank defence of armoured and infantry units in a largely static role the role in fact envisioned by the War Office for the towed 17-pdrs. These should now be relegated to the role of creating an anti-tank defence in depth, where they would not be subject to accurate mortaring or HE fire from tanks. Self-propelled anti-tank gunners should act offensively. Their role was not to 'sit and wait' but to carry out continuous observation, and generally be offensive by, amongst other things, carrying out indirect HE shoots using the capability of the 17-pdr to fire a HE shell. All these were appropriate tactics, in the light of the vulnerabilities of the towed 17-pdr, often towed forward by an unarmoured – or at best lightly armoured – vehicle with the added difficulty for the crew of manoeuvring a gun of over 4000lbs weight after the towing vehicle withdrew. Finally, Carver recommended the design of a self-propelled anti-tank gun armed with the best possible anti-tank gun, that is the 17-pdr, and included a specification for the weapon.[73]

The Valentine tank went out of production in 1943, but a number were

adapted to carry the 17 pounder gun in an open, rear-facing fighting compartment. The resultant vehicle was given the official title of SP 17-pdr Valentine, although it was usually referred to as the Archer. None saw service in Normandy. It can be surmised that reports and requirements such as Carver's were subsequently heeded at the highest levels of command as existing Archers were issued to the anti-tank battalions of the British armoured divisions in the autumn of 1944.

The emergence of alternative appropriate tactics for the Shermans in the infantry-support role which has been seen within 21st Army Group armoured units which had been in action since D-Day, and as eventually demonstrated in Carver's command of 4th Armoured Brigade, shows that commanders of independent armoured brigades such as Carver were looking beyond or, rather considering in a different way, the immediate 'how-to' problem of utilizing the capabilities of the Sherman tank and the 'in-house' infantry the Brigade had at their disposal to greatest effect. Both Carver (Shermans) and Verney (Churchills) arrived at the idea that the physical proximity of the two attacking arms was not always necessary. This 'sacred cow' that had to be sacrificed was one of the central tenets of traditional or classic British tank-infantry cooperation doctrine: that physical proximity of the two arms was required, a fact recognised by some prior to D-day but illustrated 'in action' by the conduct of the independent brigades. Verney and 6th Guards Tank Brigade (Churchills), acting on their own authority to move separately, were moving away from proximity with their infantry during BLUECOAT. At that stage their action was still underpinned by the view that the role of the tanks was to support and protect the infantry. Carver, however and 4th Armoured Brigade (Shermans) were taking action clearly into the realm of tactical experimentation and innovation during JUPITER, with the infantry ranging ahead to 'protect' the tanks. This also allowed for the possibility of action taking place where infantry might also operate in close proximity with tanks to protect them, as also realised in the armoured divisions.

Too often in the armoured divisions, however, the requirement for more infantry derived from a defensive rationale rather than from awareness of the need to get away from the idea of defence towards mutual supportiveness. Finally, though, it was beginning to appear to British commanders that the

side that could most effectively manipulate available infantry reserves would win the day.

Carver's solution can best be described as integrated armour-infantry tactics, built around the configuration and capabilities of an independent armoured brigade. These Sherman-specific tactics required changing the existing view of how armour-infantry cooperation worked, because the role of the infantry was now also to defend the tanks. Carver interpreted his role in this way, even when tasked with direct support of infantry. Further, however, an innovative aspect of Carver's solution was to develop a means of armoured assault different from War Office teaching. Thus, at another cut, his solution was a 'grand tactical' conception, and had application for 'operational-level' tasks as well.

4.4 Summing up Normandy, and the period of learning from growing successes

The insights, imagination and initiative of creative commanders at the middle level – their responses to the problems of fighting and defeating the German panzers in Normandy – played an important part in shaping final doctrine and organisation. However, different operations in Normandy show different things. All these actions demonstrate many of the issues discussed: while some show the need for change, importantly, some show lessons being learned by commanders at middle and lower level, matching structures with tactics.

Early in Normandy armoured division commanders had been frequently called on to assist in assault-type operations which had nothing to do with their intended role of armoured exploitation at all. Yet they saw infantry-armour cooperation as crucial. However, the role of an independent armoured brigade charged primarily with infantry support did not appeal to armoured commanders later on in Normandy any more than it had at the start – despite different (new) commanders. In other words, they were on the whole happy to accept the official bifurcation in armoured doctrine. This was unhelpful in sequencing the phases of operations. It did not allow operations to develop at the tempo that Montgomery and some armoured commanders now

understood was required. Nevertheless, among armoured division commanders new responses to the new tactical problems in Normandy were increasing. It was a traditional performance goal of the infantry of armoured divisions to be mobile, but the infantry's principal role was not seen as a protective one for the tanks. In early-Normandy, reflecting War Office policy at the time, the armour and the infantry were brigaded separately, largely because it was thought that the infantry would advance more slowly, and firm up gains made by the tanks. Armour and infantry were de facto mutually exclusive organisations in the Guards' Armoured and 11th Armoured Divisions. Early in the campaign the official view was that the infantry were intended to come into action only in tandem with the tanks, not be in action fully alongside and close to the tanks, to protect them. Important early setbacks in operations using manoeuvre-oriented or attrition-based methods provided the impetus for innovation with respect to so effectively combining armour and infantry in the British armoured divisions that they became integrated armour-infantry groupings.

Some commanders of armoured forces were critical when armoured divisions were called on to fight in confined country, or complained that they were often forced to deploy over too narrow an area – Hinde being a good example.[74] To realise the purposes to which armour could be put to best effect no longer rested on the perceived capabilities of the two arms in attack and defence however, but on experience, and took action away from the ideas that tanks protected infantry: that is that tanks need to stay close to the infantry in order to protect them, or tanks could best protect the infantry by ranging independently from them, to allow for action organised around ideas that infantry, in turn, protected tanks, by either ranging ahead and separately from them, or that infantry needs to staying close to the tanks in order to protect them. The conclusions reached by creative armoured division commanders such as Roberts were different from those reached by other commanders in both types of the independent brigades, and stemmed from a different basic concern: their tanks' security.

The mutually supporting structure Roberts and Adair had set in place was a force structure to facilitate the combined arms tactics necessary for success in Normandy, themselves organised around the concepts of armour-infantry

offensive action and anti-tank defence. This organisational development was also an innovation, and a highly effective and successful one.[75] It also interacted with what Montgomery believed was required – as would be brought out more fully in *The Armoured Division in Battle* (December 1944) – and that, as will be seen, was the ubiquitous use of armour, that is all armoured brigades, whether independent or in divisions to be equally capable of undertaking the roles of close-support of infantry, pursuit and exploitation.

The roles played by the creative brigadiers of independent armoured brigades identified and discussed here provide a further demonstration that the creation of doctrine and ideas for how armoured and infantry formations were organised was an interactive process at the brigade level as well. Although Carver and 4th Armoured Brigade's purpose remained that of cooperation with infantry divisions, his solution, in which 4th Armoured Brigade concentrated on close cooperation tactics between its Sherman tanks and its 'own' infantry, with this motor battalion in M5 and M9 half-tracks, would be conducted at a speed of thought and action which was new and not necessarily in close proximity to other attacking infantry from infantry divisions. This was another answer in-part to how the process of defending infantry – but also the tanks – against enemy tanks and anti-tank weapons during the fighting could be made dynamic so that defence itself – at the campaign level – became mobile rather than static. It applied particularly to the independent armoured brigades. Unlike the independent tank brigades, the armoured brigades could field this twin-attack team by employing their supporting motor battalion of infantry. The key weapon in this was the mobile 17-pdr gun, however mounted, rather than the general War Office teaching. Official War Office teaching had been that tanks which had led or supported the advance to an objective should be relieved as soon as possible by self-propelled anti-tank guns, which should in turn be relieved by towed anti-tank guns dug in. The key ingredient of Carver's thinking was to compress consolidation and exploitation into one phase. He realised that in British attempts at a breakthrough the real problem was the fragility of flank protection. His overall solution of a combined and integrated armour-infantry assault interacted with Montgomery's ideas coming from the top. Tanks would abandon their concentration on supporting fire from the flanks. The

self-propelled guns should do this, while the tanks would then be released for a further advance.

Up to late 1944, however, commanders still expected only to be guided by high level views on how to combine armour and infantry. In late 1944 the principle of separate forms of organisation for armoured brigades and infantry brigades was abandoned in favour of homogeneous brigades. The homogeneous brigade of late 1944-early 1945 can usefully be considered as a prototype battlegroup. These were mutually-reinforcing combinations of armour and infantry, and were an organisational development designed to facilitate the combined arms tactics necessary for success in the *bocage* countryside of Normandy. In was only in late 1944 that all armoured division commanders really began to accept the idea of 'square' prototype battlegroups which required an integral infantry component, although most were using this broad idea by August 1944.

The conclusion that can be drawn is that the command hierarchy functioned to produce new lessons more appropriate to North-West Europe. Thus, doctrine did not come from the top alone: it is possible to see in the doctrine Montgomery worked out in December 1944 resonances, echoes and elements of their ideas or perhaps, more accurately of ideas which had come to be accepted as the right ones among brigadiers and the COs of armoured regiments of independent armoured brigades. Consequently, the argument that can be made that the rigidity of hierarchy and line of command in general and an authoritarian, top-down control of operations was significantly harmful to the efficiency of armoured units in action in Normandy has to be weighed against the evidence for this essentially interactive creation of doctrine by middle and lower level commanders on the ground.

Overcoming having to use inferior equipment (in some cases) can fairly be held to be a demonstration of the newly learned skill of many British commanders. Equally some commanders could fairly be held responsible by Montgomery for a lack of quick thinking at a number of critical early junctures. This had led to a lack of fast action; wherein, arguably, the fleeting opportunity for breakthrough had been missed. Further, in the armoured advance after Falaise armoured divisions under commanders with the capability of producing new ideas and organisation tended to revert to a

'normal' (i.e. pre-Normandy) structure, commensurate with a pursuit phase of operations. The war had not however been won in Normandy.

1 See, for example, Montgomery, *Memoirs*, pp.222 and 254
2 IWM, Montgomery Papers, BLM 94/8, Montgomery to Maj.-Gen. F.E.W. Simpson [Director of Military Operations], 2 August 1944.
3 IWM, Carver Papers [not catalogued fully at time of writing], Lectures and Articles on Armoured Warfare, 1940s, Lieut.-Col. R.M.P. Carver to Maj.-Gen. P.C.S. Hobart, 27 July 1943.
4 LHCMA, Roberts Papers, Tanks 1943-1944, 'Notes on Armoured Divisional Tactics', 13 December 1943, by Maj.-Gen. G.P.B. Roberts.
5 LHCMA, Churcher Papers, 1, 'The Memoirs of Major General J. B. Churcher CB DSO & Bar', [n.d.], Chapter VI: 'The Invasion of Europe – The Normandy Bridgehead – The Break out and the Advance to Antwerp', pp. 30-31.
6 Ibid., pp. 33-34.
7 Ibid., p. 34. (Emphasis added).
8 Roberts, *Desert to Baltic*, p. 164.
9 Churcher, 'Memoirs', p. 35.
10 WSRO, Whistler, personal diary, 28 July 1944.
11 Churcher, 'Memoirs', p. 38.
12 Roberts, *Desert to Baltic*, p. 171.
13 LHCMA, O'Connor Papers, 5/3/17, O'Connor to Brig. H. Floyd, Bt. [Brigadier General Staff (BGS), VIII Corps – his Chief of Staff], 14 July 1944.
14 J. Baynes, *The Forgotten Victor: General Sir Richard O'Connor KT, GCB, DSO, MC* (London: Brassey's, 1989), p. 211. See also: T. Copp, *Fields of Fire: The Canadians in Normandy* (Toronto: University of Toronto Press, 2003), p. 144.
15 LHCMA, Maj. Gen. G.R. Turner Cain, Memoir, '1st Bn The Herefordshire Regiment route and battles from the Normandy bridgehead to the R Elbe in Germany, June 1944 to April 1945, including route maps and CO's pocket maps for specific incidents', [?] 1992, p. 10.
16 Lieut.-Col. G.R. Turner Cain to his wife, 7 July 1944, quoted in Turner Cain 'Memoir …', p. 7.
17 Roberts, *Desert to Baltic*, p. 165.
18 Churcher, 'Memoirs', p. 39.
19 Roberts, *Desert to Baltic*, p. 179.
20 Anon. [Maj. Edgar Palamountain], *Taurus Pursuant: A History of 11th Armoured Division* (Germany: Privately published, c.1945), p. 26
21 Churcher, 'Memoirs', p. 39
22 Lieut.-Col. G.R. Turner Cain to his wife, 22 July 1944, quoted in Turner Cain 'Memoir …', p. 14.
23 Roberts, *Desert to Baltic*, pp. 171-2.
24 Turner Cain, 'Memoir …', p. 11.
25 Roberts, *Desert to Baltic*, p. 178.
26 Turner Cain, 'Memoir …', p. 13.
27 Roberts, *Desert to Baltic*, p. 184.
28 Turner Cain, 'Memoir …', p. 16.
29 IWM Sound Archive, Reference no.18048, Capt.T.H. Peace [adjt, 5th Bn Wiltshire Regt, Normandy, 1944], reel 3.
30 Farrell, *Reflections, 39-45*, p. 75.

31 [Maj.] C. O'M. Farrell to the author, 5 September 2005. Verney departed to become GOC 7th Armoured Division in August 1944.
32 Farrell, *Reflections, 39-45*, p. 56.
33 [Maj.] C. O'M. Farrell to the author, 5 September 2005.
34 Quoted in I. Daglish, *Operation Bluecoat: The British Armoured Breakout* (Barnsley: Leo Cooper, 2003), p. 44.
35 LHCMA, Verney Papers, Verney 1/3, 'Notes for Lectures to Gds Trg Bn Pirbright (1948), No 1 – Caumont', by Maj.-Gen. G.L. Verney, p. 11.
36 Daglish, *Bluecoat,* p. 42.
37 BAOR Battlefield Tour: *Operation BLUECOAT: 8 Corps operations south of Caumont 30-31 July 1944*, (June 1947), p. 39: Lieut.-Col. C.I.H. Dunbar.
38 LHCMA, Verney Papers 1/3, 'Pirbright (1948), Caumont', p. 18.
39 Daglish, *Bluecoat*, p. 71.
40 Boscawen, *Armoured Guardsmen, 44-45*, p. 87.
41 Birr, Co. Offaly, Ireland, Birr Castle, Rosse MSS, T/46-48, Capt. the Earl of Rosse, 'The Story of 32 Guards Brigade Headquarters 31 July - ', p 5.
42 Indeed, the relevant entry in Rosse's diary can be read as inferring that the 1st WG and 6th GTB attacks were only loosely connected – except that the task of 6thGTB was to support the infantry, Rosse MSS, T/45, Rosse, personal diary, 11 August 1944.
43 See, for example L. Fortin, *British Tanks in Normandy* (Paris: Histoire & Collections, 2005), p. 50.
44 [Maj.] C. O'M. Farrell to the author, 5 September 2005.
45 Ibid., p. 241.
46 Ibid., p. 168.
47 Ibid., p. 185.
48 Daglish, *Bluecoat*, p. 72.
49 BAOR Battlefield Tour: *Operation BLUECOAT*, (June 1947), p. 47: Maj.-Gen. G.P.B. Roberts.
50 Adair, *A Guards General*, p. 147; Capt. the Earl of Rosse and Col. E.R. Hill, *The Story of the Guards Armoured Division* (London: Geoffrey Bles, 1956), p. 55.
51 Rosse and Hill, *Guards Armoured Division*, p. 83.
52 Rosse MSS, T46/48, Rosse, 'The Story of 32 Guards Brigade Headquarters 31 July - ', p. 8.
53 Rosse and Hill, *Guards Armoured Division*, p. 83.
54 Rosse MSS, T/46-48, Rosse, 'The Story of 32 Guards Brigade Headquarters, 31 July –', p. 5.
55 FM Lord Carver, *Out of Step: The Memoirs of a Field Marshal* London: Hutchinson, 1989), p. 176.
56 IWM, Carver Papers, Lectures and Articles on Armoured Warfare, 1940s, Lieut.-Col. R.M.P. Carver to Maj.-Gen. P.C.S. Hobart, 27 July 1943. (Emphasis added.)
57 TMA, RH5 4AB: 1646, '4 Armoured Brigade Lessons from Operations – Operation 'Jupiter''.
58 Maj.-Gen. R. Leakey, with Col. G. Forty, *Leakey's Luck: A Tank Commander with Nine Lives* (Stroud: Sutton, 1999), p. 126.
59 Carver, *Out of Step*, p. 193.
60 P. Delaforce, *Monty's Maurauders: Black Rat 4th Armoured Brigade and Red Fox Mask 8th Armoured Brigade* (Stroud: Sutton, 1993), pp. 77-80 and Fortin, *British Tanks, Normandy*, pp. 42-46.
61 London, UK National Archives (UKNA), Erskine Papers, WO236/7, '1st Royal Tank Regiment Lessons, 30 October-3 November 1943' by Lieut.-Col. R.M.P. Carver.
62 For the specifications of the 17-pdr see C. Henry, *British Anti-tank Artillery 1939-45 (Oxford: Osprey, 2004), pp. 17-20.*

63 Jackson, *Eighth Corps: Normandy to Rhine*, p. 26.
64 TMA, RH5 4AB: 1938, '4 Armd Bde Trg Memo no 2' by Brig. R.M.P. Carver, 25 July 1944, para. 5.
65 Ibid., para. 2.
66 These may be found among 5 pages of suggested answers to '4 Armd Bde Trg Memo No 2' re tactics by Brigade COs, from which the quotes in this paragraph are taken, TMA, RH5 4AB: 1938.
67 TMA, RH5 4AB: 1938, 'Anti-tank defence' by Brig. R.M.P. Carver, 1 August 1944.
68 London: War Office, Military Training Pamphlets (MTP series) No. 41, (1943), Part 1, *The Tactical Handling of Armoured Divisions* (July 1943), Ch. III, Section 9, para. 40.
69 TMA, RH5 4AB: 1938, 'Anti-tank defence', paras 2, 3 and 4. (Emphasis original.)
70 Ibid., para. 5.
71 Ibid., para. 8.
72 Ibid., para. 5.
73 Ibid., para. 6.
74 See Chapter 3.
75 Further, the homogeneous brigade concept, was also adopted and adapted in TOTALIZE/TRACTABLE.

5

High-level Responses and Dimensions of Operational Practice in late 1944 and before the Rhine Crossing

5.1 Two-way interaction

In the process of fighting from D-Day, many ideas were displaced by new experiences. What some commanders within 21st Army Group thought would be valuable ceased to be so. In response to the problems of fighting from the beaches of Normandy to the borders of Germany, in mid- to late 1944 armour doctrine was being challenged, criticised and changed in 21st Army Group by commanders at lower level. This somewhat anarchic situation persisted throughout the fighting in Normandy and during the subsequent fighting in Belgium and southern Holland, up to the end of 1944. A two-way interaction between lower level commanders and those alongside and above them continued to operate to shape operational doctrine.

Notwithstanding, contributors below the higher levels of command also played an important part in producing the ultimately successful methods of combat of 21st Army Group as we have seen in the previous chapter. The Anglo-Canadian operation TOTALIZE, likewise ‘included many innovations intended by [Lieutenant-General Guy] Simonds to rectify the operational difficulties thus far encountered by the Anglo-Canadian forces’.[1]

Circumstances have consequences, which produce new circumstances. There had been heavy static fighting in Normandy culminating in TOTALIZE/TRACTABLE and the closing of the Falaise Pocket.[2] Then there was an advance at tremendous speed into the Low Countries, followed by the risk of static fighting again. September 1944 is the first time there was a

pause in which to take stock. The defeat at Arnhem had significant consequences for the operational and tactical methods of 21st Army Group. Montgomery had his ideas – those of 21st Army Group, and he developed them in doctrinal pamphlets in November and December 1944. Although the pamphlets appeared over Montgomery's name and with his authority, he worked with others to produce them. Montgomery's pamphlets on the armoured and infantry divisions of late 1944 may thus be seen as an outcome of a process that both embodied and reflected the desired doctrine and one in which a key group of commanders at differing levels were involved.

The uniformity of 21st Army Group doctrine for and in the advance to the Rhine is sometimes confused with assumptions that there was uniformity which was constant more or less from the mid-point of the fighting in Normandy, because success in adapting methods and practices was also driven by middle-level commanders. In a similar way, while there was a general dynamic in which Montgomery sought to impose his view and while that view was ostensibly accepted at corps and divisional level, a more complex set of relations between people, circumstances and equipment developed.

5.2 TOTALIZE: high level command responses

On 8 August 1944 1st Canadian Army launched Operation TOTALIZE, an offensive aimed at Falaise. TOTALIZE included many innovations intended to rectify the difficulty met until then by the Anglo-Canadian forces: 'how to get the armour through the enemy gun screen to sufficient depth to disrupt the German anti-tank gun and mortar defence, in country highly suited to the tactics of the latter combination.'[3] A successful break-in – Simonds knew – would bring his forces almost immediately into contact with the Germans' armoured second line of defence. In the preparations for D-Day Simonds had given considerable thought to the problem of breaking into the strong German line, breaking through, and exploiting this into a breakout.[4] He also appreciated that a number of 21st Army Group's operations had achieved breakins but had been unable to maintain the advance.

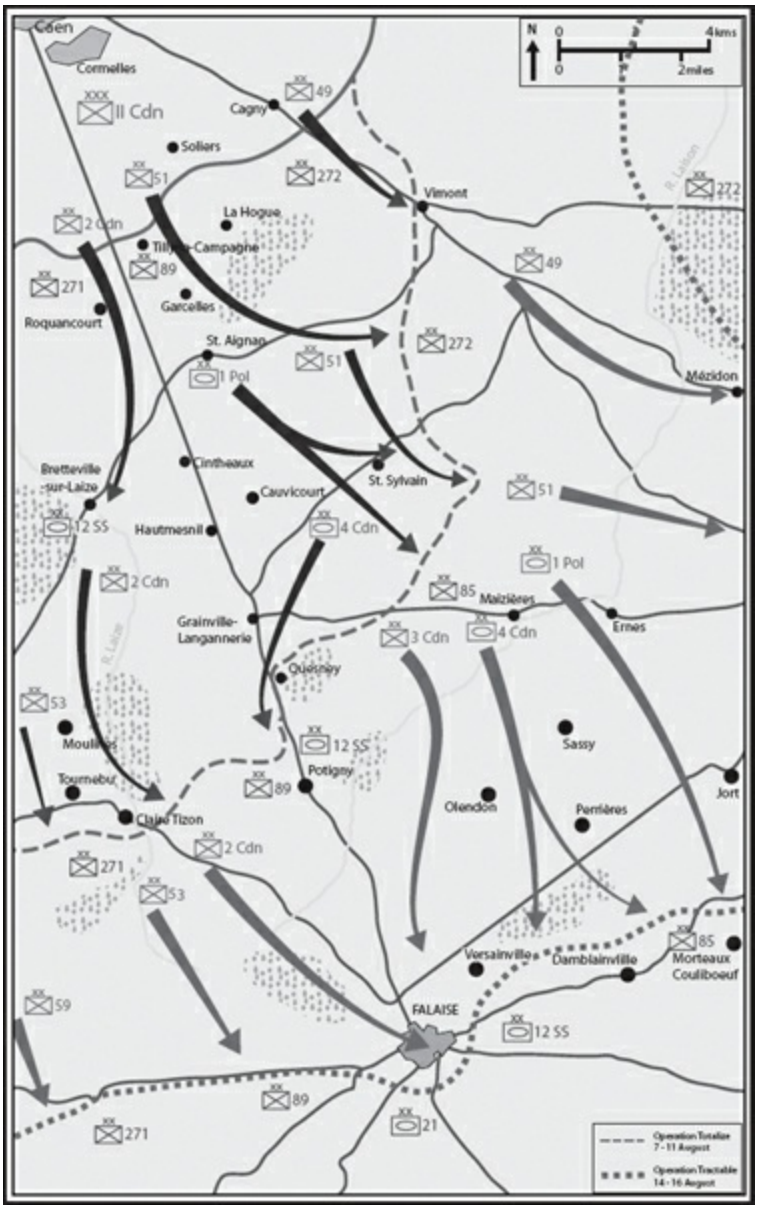
The attack, Simonds believed, 'must be carefully organised and strongly

supported by all available artillery'. He knew that 'the essence of the German system of defence is the counter-attack'. Thus, 'the defeat of these counter-attacks must form part of the original plan of attack which must include arrangements for artillery support and the forward moves of infantry supporting weapons – including tanks – on the objective'. Further, as 'there is bound to be a pause during this phase when the leading troops on the objective are going to be without the full support of the artillery [t]his is the period at which the employment of all available air support is most useful to tide over the gap'. Simonds saw the infantry division as the 'sledge hammer' in the attack. The armoured division was to be a 'weapon of opportunity', capable of dealing with enemy rearguard positions and developing a breakout, but too weak in infantry to carry out an attack in depth and 'still retain fresh infantry to co-operate with the armour in more fluid operations for which it is specially designed'.[5]

Simonds' plan addressed the problem of breaking through the German defences in three ways. First and most significantly, II Canadian Corps' leading forces did not suffer from inadequate levels of infantry support. The initial penetration was made by infantry and armour together. In TOTALIZE, the direction and objectives of the operation could not be disguised. Nevertheless, Simonds was keen to effect surprise. Thus, the operation began at nightfall and Phase One continued through the hours of darkness. The assaulting infantry was carried forward in half-tracks and armoured vehicles specially modified to carry infantry (Kangaroos). (O'Connor had also identified the need for really suitable armoured vehicles in which the infantry could be carried forward into battle.) His instruction to his divisional commanders amplified his plan: 'the infantry accompanying the armour to first objectives in Phase One must go straight through with the armour. […] The essentials are that the infantry shall be carried in bullet and splinter-proof vehicles to their actual objectives'.[6] Second, airpower would play a more complete and integrated role by providing fire support deep into German-held territory when the advance would be carried beyond the range of the artillery. Third, there was also an aerial bombardment, intended to deal with the main, second German defensive line. With these factors in place Simonds hoped to achieve a breakthrough, at which point his two armoured divisions would be

introduced into the battle in an exploitation role.

TOTALIZE was the first operation that British or Canadian troops of infantry divisions would be carried into battle in vehicles with comparable armoured protection and mobility as the tanks they accompanied.[7] However, although TOTALIZE was innovative in this and other respects, it was also a strictly timetabled operation, as well as one in which Simonds retained tight control of the forces employed.[8] On the morning of 8 August, II Canadian Corps had in effect breached the German lines.[9] The advance was halted until the second bombing raid had taken place. A considerable delay ensued, allowing the Germans to plug the gap created by British-Canadian forces. Further, II Canadian Corps also required time to reorganise and gather itself for further operations. Momentum may have been lost, but it would have been contrary to Simonds' approach not to take the time to bring up the Canadians' anti-tank guns, coordinate their defences, so as to be ready to meet a German counter-attack. Furthermore, the inexperience of the two armoured divisions, intended to spearhead Phase Two of TOTALIZE, further militated against success.[10] Finally, the fact was that no one on the Allied side was aware of the presence of a number of 88mm guns south of the general line from Bretteville-sur-Laize to St. Sylvain.[11]



Map 5 Operations TOTALIZE and TRACTABLE, 8-21 August

Looking from the outside in, among many experienced middle-level commanders there was a recognition that what was the right thing to do could now be accepted: in particular, getting everyone to sing from the same hymn sheet by instructing and integrating replacements in battlefield tactics; allowing subordinates to understand as much of the big picture as could be understood; and disseminating useful innovations as widely as possible.[12] As a Squadron Commander of the Sherbrooke Fusilier Regiment who took part in TOTALIZE put it, ‘men fight their battle on what they’re told to do, and

you've got to keep ensuring in the back of your mind that they do understand what they're supposed to do'.[13] The most significant thing TOTALIZE tells us is the failure of the top-down control and execution of operations. Simonds's great contribution was to mould a form of cooperation for the advancing armour and infantry, whereby they were given the technical means to attack together, which could be successfully exploited by tactical commanders. However, the big-picture problem in terms of operational technique was getting everyone up and down the levels of command to sing from the same hymn sheet. Simonds browbeat his commanders, the armoured commanders in particular, for what he saw as a lack of aggressive spirit, if not something far worse.[14] TOTALIZE is a classic example of how responsibility for failure was put onto subordinate commanders rather than understood by the higher commander involved as endemic to the system for tactical command and control.

On 14 and 15 August 1944, as part of Operation TRACTABLE, the continuation of TOTALIZE, 4th Armoured Brigade was under 53rd (Welsh) Infantry Division, which was struggling through very dense country to cut the main road from Condé to Falaise. Major-General R.K. Ross, GOC 53rd Infantry Division wanted to advance by moving one infantry brigade through another in a series of coordinated, set-piece infantry-cum-armour attacks. Carver, however, appreciated that if the armour could push on as fast as possible to seize objectives that would increase the pressure, tightening the encirclement of the enemy, the results would justify the risks. The 44th RTR dashed ahead of the infantry of the Welsh division and by last light on 15 August had cut the Falaise road from the west, leaving 4th Battalion Royal Welch Fusiliers to catch up as best they could during the night. In a very different context, this was the same decision Brigadier Verney had taken at Caumont. It shows, moreover, that Carver no longer felt bound by or to the need for an anti-tank effort involving all arms to create the conditions for exploitation by the armour which he had previously identified would be usual. By that point however, the German front in Normandy was breaking up, so, as the War Diary reflected the need to create these conditions no longer existed.[15]

5.3. Montgomery's additional contribution: and the strategic and operational scene after Arnhem

Whilst both British and German reserves of troops were finite, a lengthy campaign of attrition, which might favour the defender, had to be avoided. Even when Montgomery felt forced to be defensive he felt he had to be proactively so. For offensive operations to succeed, and succeed more quickly, the potential fighting power of Montgomery's army group would have to be applied successfully, and always sooner rather than later. This, in turn, would require the active involvement and engagement of commanders and staff officers. There were changes in practice. Commanders of the tank brigades and independent armoured brigades, corps, and divisional commanders were drivers of these changes. Montgomery's contribution was that 'the tank, the gun, the anti-tank gun, the infantry, the engineers – have all got to work in the closest co-operation', and that a tank was required that 'will fit well into this tactical conception'.[16] There was a further development of practice as the campaign developed, as part of a wider process under Montgomery's direction. Montgomery's further doctrinal contribution – that the combined efforts of all levels of command were also necessary – would be more fully addressed in time as his understanding of the need to develop initiative by those lower down grew. However, BLUECOAT also shows us the beginnings of a pattern of command changes by Montgomery to replace commanders who did not come up to scratch.

What people thought they could do related to their equipment amongst other factors. Montgomery had come to believe that a dual purpose or 'capital' tank was required, suitable for working with infantry, and also for work in an armoured division; it would be an important battlefield weapon. On the battlefield there was no mass availability of a true multi-role tank. He imagined that the introduction of the new A30 Challenger tank would at least immediately answer the pressing need for tanks equipped with the latest version of the 17-pdr. However, introduced in July 1944, the Challenger, which arose from attempts to up-gun the Cromwell with the new high-velocity 17-pdr quick-firing anti-tank gun, was not a battlefield success. Yet, later on, new tanks were would become available: the best Britain could

produce, although they too were intended for ‘armoured division-type’ tasks rather than infantry cooperation (e.g. the A34 Comet was officially a cruiser tank). In the interim, what Montgomery could do was to get everybody to think along similar lines: the major-generals commanding divisions and also the brigadiers commanding the two types of independent brigades, to produce commonality across the levels of command to ensure what he would soon be calling ‘ubiquity’. According to Montgomery’s ‘capital tank’ idea, from the end of 1944, making the Sherman tank – and all other models of tanks to hand – a multi-role tank would best match tactics and a tank that was available to operational aims and intentions. But we must also note his earlier view, in July, that ‘the armoured division requires four regiments of capital tanks, all having the same type of tank; three form the armoured brigade, and the fourth is trained particularly for tasks with infantry, for reconnaissance tasks, and so on’.[17] This was a division of labour which would prove unsatisfactory, because of the need for tanks and infantry to work together almost all the time. It also violated Montgomery’s tactical principle of ubiquity of armour. From mid-1944, Montgomery realised however that this development would need to be complemented by managing expectations among the infantry and the armour as to what the other could achieve, so that the effect of what they could achieve together would be maximised.

Montgomery’s Memorandum on British Armour of July 1944 is a document which can be taken on two levels. While its claims that British tanks, particularly those mounting the 17-pdr gun, had nothing to fear from the Panther and Tiger tank, provided British tanks were handled properly, it did little to draw out the reality of the short supply of British Sherman Fireflies, equipped with the 17-pdr in Normandy, and that most Allied tanks carried the 75mm gun (while it is possible to see, at best, obfuscation here, and, at worse, disingenuousness, there is also room for a view that this was also for the perfectly good military reason of boosting morale). However, Montgomery knew within hours what his commanders’ views were. The Memorandum also contained, for example, determinations regarding the newest German tanks’ vulnerabilities, and the best methods for dealing with them which, evidence (such as Barker’s letters home of 25 and 26 June 1944) suggests, reflected commanders’ most recent experience.

A situation had arisen in which the perception had grown among tanks and infantry that it was the job of the other to defend them as they did their job of attacking. This was what Montgomery was trying to change, replacing it with the idea that there should be one common, offensive purpose. Thus he developed his functional doctrine.

Further, the circumstances that transpired during September 1944 had important consequences, both for Montgomery and for the British Army, which would affect the strategic and operational scene in late 1944. September began with Montgomery's promotion in rank to Field-Marshal but his effective demotion with regard to planning, from the role of overall Allied commander on land which he had exercised throughout the fighting in Normandy, to that of commander of the principally Anglo-Canadian 21st Army Group. Eisenhower assumed the role of Land Forces Commander, in addition to his role as Supreme Allied Commander. Also, against all expectations, the Germans managed to re-establish a front. This brought to a head disagreements between Allied commanders over strategy. The month ended with Arnhem: the attempted opening up by airborne troops of a narrow corridor to include the vital bridges over the waterways on the Dutch-German border, along which the armour-heavy XXX Corps could quickly pass to strike into the Ruhr. It was now clear that the war was not likely to be over by Christmas and the end of 1944.[18]

After his failure at Arnhem, Montgomery realised that to make the final assault on Germany – that is, for the crossing of the Rhine to be successful – it would first be necessary to destroy the German forces between the Maas and the Rhine. Nevertheless, it was, he explained to Eisenhower and other high Allied commanders at Maastricht on 7 December 1944 'essential that we force [i.e. re-impose] mobile war on the Germans by the spring or early summer [of 1945]. They have little transport, little petrol, and tanks that cannot compete with ours in the mobile battle. Once the war becomes mobile, that is the end of the Germans'.[19] The fighting in the Ardennes confirmed that the pursuit phase of the campaign post-Normandy was over. The increasing numerical superiority of the Allies in tanks and transport vehicles (allowing the tanks to be kept supplied with fuel and ammunition – important for maintaining the momentum in mobile warfare) as well as improvements

to the armament, protection and speed of British tanks, and the rapid Allied advance across France to the borders of Germany – itself could not, though, obscure deficiencies in the British practice of mobile combined arms tactics with tanks, anti-tank artillery and infantry which had highlighted command, doctrinal and organisational shortcomings.

From the end of September 1944, Montgomery's aim was to improve the performance of his armoured and infantry divisions in battle in order to wrest the initiative back from the German Army now that, contrary to expectations, it had managed to re-establish itself as an effective fighting force. The backdrop now was the operations of Montgomery's 21st Army Group in North-West Europe in the last three months of 1944 to clear the Scheldt estuary of enemy forces and make possible the opening of the large Belgian port of Antwerp to Allied shipping, consolidate the narrow corridor retained by Allied forces after the survivors of Arnhem had been withdrawn, and also secure better positions for his forces from which to advance into Germany in 1945.

Different units and formations tended to lay the blame for their troubles on one another.[20] In reality, outcomes were the consequence of the interrelationships between three variables which were in play throughout this period: 'generalship', or operational art and tactical skills; the impact on the Germans of the imposition of relentless pressure via mobile war; and 'ground', or best utilisation of time and space factors. Together they resulted in the infantry giving support to the tanks with quick action and an altogether more intimate mutual tank-infantry support being achieved during the advance through Belgium and Holland into Germany in the last three months of 1944.

5. 4 Interactions within the Corps-Division-Brigade hierarchy

Montgomery had earlier decided that Lieutenant-General B.G. Horrocks was the man to command the pursuit of the German armies defeated in Normandy. He recommended Horrocks be appointed to the command of XXX Corps and had regrouped it for that task and for MARKET-GARDEN.[21] O'Connor and VIII Corps were to play an important but

subsidiary role and operate on the right of XXX Corps. O'Connor had played just such a pursuit role following up a retreating enemy in 1940-41 so he 'began to wonder whether he was out of favour' with Montgomery.[22]

During the Winter of 1944-45 O'Connor's VIII Corps carried out what the corps history calls useful though unspectacular operations and closed up to the line of the River Maas.[23] The first of these operations was CONSTELLATION, the last of VIII Corps operations to be launched in North-West Europe under his command. Afterwards Roberts, a leading subordinate of O'Connor, charged him with not understanding the relationship between armour and ground in late 1944 Europe and supported Montgomery's decision to prefer Horrocks because this was just the sort of operation Horrocks 'would like and excel at'.[24]

Plate 8 Lieutenant-General Sir R.N. O'Connor, GOC VIII Corps. A picture is worth a thousand words: while this interesting photograph from late in 1944 has been seen in various forms and with various different captions, for our purposes what is significant is the evident awkward body language and apparent strain on the faces of the two friends O'Connor (second from left) and Montgomery. Beneath the smiles, O'Connor's future as GOC VIII Corps is now very much in doubt in Montgomery's mind.

G.L. Verney (first on right), who has also featured in our story, now commanded 7th Armoured Division (photo IWM B 10388: © Imperial War Museum, Lambeth, London).

The professional criticisms of the abortive Operation GATWICK demonstrated O'Connor's perceived shortcomings. Coming immediately before CONSTELLATION, Operation GATWICK was to clear the Reichswald by using 3rd Division (VIII Corps). When O'Connor visited Whistler, one of his divisional commanders, in the early days of October, Whistler told him that he would require extra troops because the ground was so obviously unsuited to the employment of armour as a 'force multiplier'. Whistler's tirade in his diary against 'chinagraph warriors who make marks on the map without reference to sense' reflected his misgivings that GATWICK would require more troops than O'Connor appeared to envisage.[25] Whistler's view of Horrocks was that 'he is moderately practical', compared to O'Connor, 'our chinagraph king [who] fights all his battles on it and they are generally inaccurately marked into the bargain'. 'I take a dim view and would sooner have a different master', he concluded.[26] As with GOODWOOD, neither Roberts nor Whistler fully recognised just how little leeway O'Connor had to alter Montgomery's master plan in the case of GATWICK. It was not until Montgomery decided, after due consideration, that it would require too many troops in view of the current operations farther west to clear the Antwerp approaches that the operation was cancelled. This episode re-raises issues of importance. There are deep questions both about the extent to which a genuine consensus on operational methods existed at high level and about what events such as O'Connor's departure tell us of Montgomery's method of command.

The critical factors were now different again and to conduct military operations successfully now needed different structures. Roberts correctly identified the important factors and an applicable solution to the related process-challenge issues involved. Military operations were now 'quite different to anything we had met before', he explained; 'now we came up against natural obstacles, sometimes fortified and sometimes not, but when held by the Germans they needed a lot of effort. To deal with this situation, we organised ourselves again into 'mixed' brigade groups'.[27] The related concerns of the maintenance of high morale and the avoidance of heavy

casualties – about which there was true consensus – were further issues to address, and achieving objectives which needed a lot of effort was ‘not very easy’.[28] In the middle of December 1944, Whistler reproached himself with ‘now finding fault with a unit [in 8th Brigade] that takes too great care of the lives of its men. I am sure it results in heavier casualties and lower morale somehow’.[29] In his Christmas message, Whistler declared: ‘Splendid as has been the support given by all arms of the Division, it is that small number of men in the Rifle Companies of the Infantry Battalions who have to take the ground and hold it’.[30] Behind this lay the belief that by holding back a commander might actually incur more casualties, likely to be heaviest among the infantry. Yet, everywhere there was a shortage of trained infantry replacements, so that in mid-December he could see ‘no way of producing the result’.[31]

Objectives could, however, be achieved at least cost. 3rd Division’s task in CONSTELLATION was to attack southeast from Oploo, seize the two small towns of Overloon and Venraij set among the woods on the outskirts of marshland, and thus draw in enemy reserves. There were thus to be two parts to 3rd Division’s task: first the capture of Overloon and then the capture of Venraij. The Division’s part in CONSTELLATION was planned at Divisional HQ on 10 October, orders going out that afternoon for the next day. Bad weather postponed the operation until 12 October. 8th Brigade was to carry out the first task and 9th Brigade the second. The practice of concentration of force on a narrow frontage with units echeloned in depth ensured the maximum offensive power at the point of break-in. Having fresh infantry units ready to exploit the success gained was also important, and 185th Brigade would be ready to assist either phase and exploit the success of the second. The countryside was flat and suited the defence. It was to be yet another close-quarter infantry slogging match. It was equally obvious that these attacks would require the strongest support. To provide it, the division had two battalions of 6th Guards Tank Brigade, with whom they had practised crossing water obstacles and dealing with counter-mortar problems in September. However, Whistler’s further interpretation of the principle of Concentration relied on artillery and air power rather than fire power from armour to carry the attack forward. The guns of 25th Field Regiment and all

the guns of 11th Armoured Division, 15th (Scottish) Infantry Division, and VIII Corps' Army Group Royal Artillery (8th AGRA) were added to that of the division's three field regiments. Fire support from the air was to be provided by Hawker Typhoons of 83 Group RAF and Martin Marauders of the USAAF. 'Unless something funny happens very soon I am going to have a very satisfactory battle as far as planning is concerned. I expect to set the troops off on the right foot anyway and that is all I aim to do ever', Whistler noted.[32]

It is appropriate to look at how O'Connor handled CONSTELLATION. Strikingly, this was the one occasion on which O'Connor operated outside of the straight-jacket imposed by Montgomery and his methods. CONSTELLATION was not a typical 'Montgomery plan'. It placed great emphasis on the element of surprise, for example: attacking first in one sector and drawing off enemy forces would facilitate the success of a surprise attack in another sector. Similarly, O'Connor planned to mask the presence of 15th Infantry Division and take full advantage of the element of 'surprise' by drawing the bulk of the enemy northwards before a thrust by this division came in from the south, that is from the enemy rear. In so doing he was reprising his Operation COMPASS (September 1940), when nobody had expected the British to come from behind, that is the major turning of a flank – the sort of move O'Connor performed in 1940.[33] The initial three phases would take the town of Venraij, and place 11th Armoured Division and 7th US Armoured Division in positions from which they would be able to carry out the fourth phase, when the two armoured divisions and 15th Division were to converge on Venlo. 11th Armoured had made several thrusts into the Peel marshland from the north, towards Venraij, at the end of September. From these it was apparent before CONSTELLATION began that terrain was a factor which would impact adversely on armour's ability to carry out its intended role of rapid exploitation. As Roberts put it: 'it became clear that we were not going to get anywhere until a carefully planned *full scale attack* was made'.[34] Roberts' 'full scale attack' is taken to mean a well-supported assault including all arms (and possibly also across a wider salient). It was becoming apparent to these two divisional commanders, Whistler and Roberts, that it was difficult to conduct newtype operations, where the infantry and their

supporting tanks, or tanks supported by insufficient infantry faced a resourceful enemy who contested every inch of ground, without incurring heavy casualties. The solution that would emerge emphasised closer mutual infantry-tank support, armour-infantry unit organisation and structure, and anti-tank artillery cooperation tied in appropriately to tactical fire plans and support from field, medium and heavy artillery as well as from the air.

On 12 October and for the next three days, in appalling weather and over adverse terrain, 3rd Division and 11th Armoured Division manoeuvred into position and drew the enemy northwards, as intended. By 16 October, elements of the two divisions were ready to catch the Germans in a pincer movement around Venraij and 7th US Armoured Division was about to be launched into action when 15th Division was withdrawn to take part in the clearance of the Scheldt estuary. Limited advances were made on 17 October, and Venraij itself was captured. However, without 15th Division, further movement in the Maas pocket was impossible and VIII Corps adopted defensive positions along its extended front. Roberts thought that the operation went well 'until 15th (Scottish) Division had to be withdrawn'.[35]

This view sits uneasily with Whistler's description of the operation: 'bags of mines and desperate mud. Churchills bogging down everywhere. Bridges collapsing – in fact every bloody thing quite bloody'.[36] The infantry and their supporting tanks faced an enemy who contested every inch of ground. Whistler thought the Commanding Officer of 6th Guards Tank Brigade 'first class'. However, in conditions which impeded armoured movement, infantry of 8th Brigade went on without the tanks of 4th Grenadier Guards 'which was particularly good show'. The tanks of 4th Grenadier Guards took a long time to get forward, however, and the infantry had to push on by themselves – partly because the ground was so unsuitable for tanks and had been heavily mined. Whistler tried to get one of the Grenadier officers who had been 'pretty poor' replaced, and felt that the Commanding Officer, armoured-trained but with an infantry background, could not be relied on 'to do the right thing'. Further, at one point, he noted: 'had all my guns taken from me and now have lost the air support. Life is a little difficult when such things happen in the middle of a battle'.

Plate 9 Lieutenant-General E.H. Barker, who has succeeded O'Connor as GOC VIII Corps, inspects various captured German weapons during a visit to Whistler's 3rd Division, on 26 January 1945. Interestingly, Barker (2nd from left) wears the beret of the KRRC. Although not the only one of Montgomery's generals to have a light infantry background, Barker's inspiration for, and implementation of operations Rebound and Thruster substantiated the KRRC motto, 'Celer et Audax (Swift and Bold)' as well as earlier experience he had gained while the first British armoured division was being formed (photo IWM B 14185: © Imperial War Museum, Lambeth, London).

What frustrated Whistler was that he could control and manage only the components of which he was in command. This compares with Barker's creation of Clarkeforce later in October 1944 (see below), as an important step which broadly pointed in the direction of the creation and employment of proto modern 'battlegroups'.

In response to what he considered an arbitrary intervention to remove one of his subordinate commanders, General Lindsay Silvester, commanding 7th US Armoured Division, O'Connor asked to be relieved of his command on

20 October. In the meantime, Whistler's relations with O'Connor had begun steadily to improve: 'since [O'Connor's Chief of Staff] Harry Floyd has left the little man [O'Connor] has completely changed […] he and I are now very good friends and begin to understand each other'.[37] Thus, support among and between fellow commanders seems, by this time, to have been based chiefly on the ability to get the job done.[38] On 27 November 1944 O'Connor received his official posting as GOC-in-C Eastern Army India and on 30 November started to hand over his command to Lieutenant-General Barker, formerly GOC 49th Division. In December, VIII Corps held the entire 2nd Army front on the Maas from Culijk in the north to Maesyck in the south. Constant patrolling, minefield reconnaissance and shelling were carried out to harass the enemy, but apart from this VIII Corps was again static.[39]

It is in the relationship between Montgomery's general theories and the actual physical circumstances that commanders – and their ideas – faced that the answers to the questions of how the creation of doctrine depended on personalities, which personalities, and with what consequences are to be found. The ability of the British Army to overcome the Germans continued to depend on its ability to mount successful combined arms operations. Outcomes were the consequence of the interrelationships between three variables which were in play throughout this period: 'generalship'; the Germans; and 'ground'. It is therefore appropriate at this juncture to begin to make some assessment of the generalship at the end of 1944 of the particular subordinate commanders discussed hitherto and its interaction with the other variables at play. O'Connor had had little leeway to alter Montgomery's master plan as Montgomery allowed his corps commanders little scope in the planning of operations. Equally, when O'Connor did gain a certain amount of leeway in the planning of CONSTELLATION he showed the insight, imagination and dynamic leadership that he had shown in desert warfare against the Italians. Further, although it can be fairly concluded that O'Connor had vast operational experience and although this was not exploited to the full by Montgomery, whether in the conditions prevailing in Europe in late 1944 this was a wrong experience – and therefore not actually exploitable at that time – is a moot point, as will become apparent.[40] The existence of a genuine consensus on operational methods at high level –

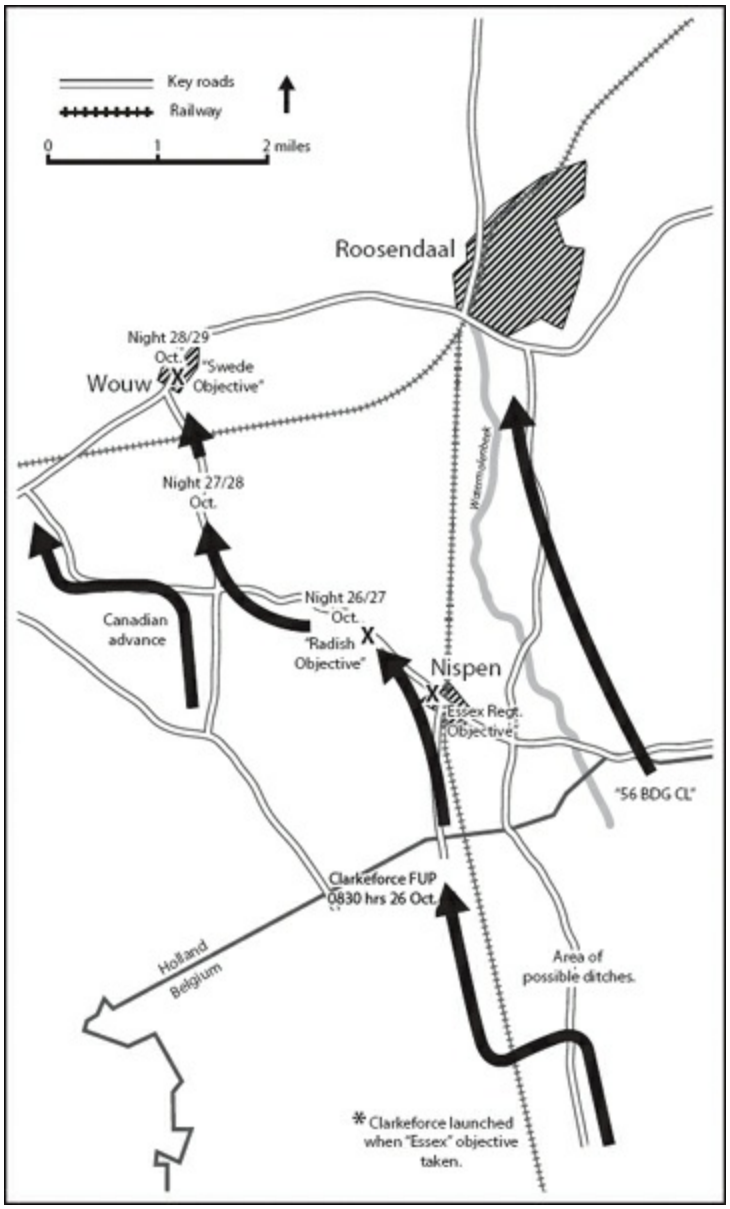
irrelevant at the time by virtue of Montgomery's salience at every level of command and the way he sought to mediate his ideas through his corps and divisional commanders – also becomes questionable. The importance of the example of O'Connor – not the only one because Bucknall was also deemed to have performed badly, but very interesting in the light of O'Connor's undoubted ability – is in how it illuminates Montgomery's method of command.

In Roberts' view, O'Connor's handling of CONSTELLATION was 'the best he had shown in the campaign'.[41] O'Connor's biographer believed that his record of handling VIII Corps in battle indicated that he merely had to catch up with tactical lessons missed during his captivity as a prisoner of the Italians.[42] Later, he revised that judgement, believing that O'Connor 'learnt much in N.W. Europe, but was too old, and could not have gone on any longer than he did'.[43] Roberts's praise for O'Connor's handling of CONSTELLATION, when, in comparison with earlier operations, he was under Montgomery's control, confirms that O'Connor – for whatever reason – had some difficulty operating within the straightjacket imposed by Montgomery and his methods. This fits with Baynes's later insight, which seems the more perceptive judgement. Thus, Montgomery seems to have decided that O'Connor was somewhere in a grey area between seeming to question the emerging methods and 'failing'.

However, in assessing how effectively O'Connor overcame the enemy opposition in the Maas pocket and achieved the objective of clearing it set for him, account must be taken of the fact that the temporary removal of 15th Division to support the Tilburg offensive was due to circumstances entirely beyond his control: the shortage of trained infantry. The withdrawal of 15th Division in turn underlines the pressure Montgomery was under, in the face of increasing American numerical predominance, to secure not only the defeat of Germany but also a high profile role for Britain in that defeat. Time was not a tool at his disposal: the terrain was against his troops; and the Germans were fighting with determination and skill. O'Connor was most definitely not incompetent, but Montgomery's readiness to let him go has been widely accepted as the equivalent of relieving him of his command. Barker's apprehension that he too 'might be pushed off to India or some

bloody place with no interest like this' is evidence which supports this view.[44] More importantly, it is indicative of the fact that there was a more general feeling in the air that this is what happened to people who did not toe the line and operate within the mould of uncritical consensus which Montgomery was trying to create.

On 26/27 October 1944, the Germans launched a counter-attack in the Meijel area in O'Connor's VIII Corps sector, striking the thinly held positions at Meijel, southeast of Eindhoven with two mechanised divisions. Strong German attacks westward from Meijel on 28 October were broken up by artillery which O'Connor had sent to the 7th US Armoured Division. On the most crucial day of the battle, 29 October, it was once again concentrated artillery fire that decimated the attacking Germans. O'Connor was content with merely pushing the enemy back towards the Maas until a proper operation could be organised to clear the whole of the Maas pocket.[45] On this date also, Barker on his own authority as the infantry divisional commander, decided to launch Clarkeforce in an attack on Roosendaal as part of the ongoing struggle to capture the Scheldt estuary in south-western Holland in the face of fierce enemy resistance.[46]



Map 6 Operation THRUSTER map. Advance of Clarkeforce during Operation THRUSTER, reproducing the hand drawn detail of the original, almost certainly ascribable to General Barker.

The British I Corps (49th Division attached) had been tasked to clear the large rectangle some forty miles wide and thirty miles in depth of southern Holland to the line of the river Maas, while II Canadian Corps cleared the Scheldt estuary (all operating under Simonds' command as temporary commander of the Canadian 1st Army). On 20 October, I Corps advanced with 49th Division, which had 34th Tank Brigade under command in the centre, directed on Roosendaal (Operation REBOUND). The axis of 49th Division's advance was from Wuestmalle, through Brecht, Wustwezel,

Nieumoer and Esschen to Roosendaal, a distance of about twenty miles. Barker's plan was to launch an armour-infantry force through a gap made by the division supported by the tanks of the tank brigade, to gain ground and act as a spearhead to the division whose main bulk would follow up and take over as opportunity occurred. In the operations that took place (Operation THRUSTER), Clarkeforce performed as envisaged.

Both these apparently minor operations were of considerable tactical and operational importance.[47] Despite its inevitable failure after Allied numerical superiority was brought to bear, the German attack on Meijel with two mechanised divisions demonstrated that the German Army could still mount a surprise counter-stroke against weakly defended sections of the Allied line. Even though Barker's armoured force was held up by German self-propelled guns and anti-tank ditches 'so we didn't get the rush through we hoped', the performance of Clarkeforce showed Montgomery a way in which his numerical superiority in tanks – most of them in independent brigades – could be brought to bear, opening up again the possibility of mobile operations on a decisive scale.[48] Equally, Barker knew how Montgomery wanted him to fight: he seems to have needed no convincing. Barker, who as a then divisional commander appears to have had no direct involvement in the drafting of the pamphlets which Montgomery was soon to produce, thought that their content was self-evident as a result of his own experience of the fighting.[49] Thus, the thinking of subordinate commanders, derived from their experiences of actually fighting on the ground with these tools, was congruent with Montgomery's thinking.

The raid by two troops of 9th Royal Tank Regiment (9thRTR) during REBOUND-THRUSTER to harass enemy positions on the right flank in the Hiebart-Steenhoven area on 22 October can be seen as a move conforming to Montgomery's alternate thrusts technique. Like Whistler, Barker relied on artillery and air power to ensure success without taking heavy infantry casualties. In the face of a determined German counter-attack in the Aerle-Nieukerk area earlier in October, he recorded that 'my guns have had a lot of shooting these last two days and I've had the RAF loose on several targets to help keep the Boche in order'. In November he noted: 'I fear the Yanks do it with undue casualties – they simply don't know how to use their artillery.'[50]

The employment of 9th RTR in support of 56th Brigade to create an initial breach in the enemy defences was in accordance with prevailing British principles for the employment of a heavy tank unit armed with heavy, or infantry, tanks. It is important to note however that, in Clarkeforce, Barker believed he had created a separate 'armoured force', to be employed in a different manner from that of a conventional tank brigade. In his farewell message to 49th Division he spoke of a 'classic advance' towards Tilburg, and later to Roosendaal and Willemstadt. This should be taken literally to refer to the 'classic' fast-moving British tank-infantry advances of April 1918. The speed at which the phases of the operation were pursued to attempt to keep up the momentum of advance is what is particularly important here. And while, clearly, command was not decentralised to the armoured commander, equally clearly Barker understood Clarke's command to be an independent one in battle, with the overall command of all the elements of Clarkeforce resting with the tank formation. Clarke's verdict was that 'under such circumstances the fullest tank-inf[antry] cooperation could only be natural and automatic'.[51]

While Roberts and Whistler were both trying to deal with the problem of how to win their battles without heavy casualties in this unfavourable operating environment, their divisions were actually fighting separate battles within the single VIII Corps plan. Whistler's 3rd Division was fighting its battle with its 'own' armour, 6th Guards Tank Brigade, in accordance with existing British tank-infantry cooperation doctrine, that is that an infantry division would fight with an independent armoured or tank brigade in support. Furthermore, Whistler, because he believed the infantry's role was the hardest, was prepared to push infantry forward without tanks and rely only on artillery and airpower when he thought this was absolutely necessary for success. In the flat, low lying land between rivers and canals – themselves important barriers to movement – tanks were prey to anti-tank guns firing at long range, while the Germans' extensive use of minefields between these water obstacles further enhanced the security of the fixed anti-tank defences they had prepared. However, reliance on artillery firepower, while an important ingredient of the solution, was actually increasingly incompatible with the fluid, mobile warfare which Montgomery now additionally wished

to impose on the enemy as soon as possible.

Montgomery's solution to realise his operational level aims was ingenuity or conceptual superiority, and the outfall of this, at the tactical level, was that he saw the need to manage the expectations of infantry and armour as to what the other could achieve in order to ensure effective coordinated armour-infantry collaboration. Although the process of co-creation of doctrine was a process which was open to new ideas, once the new doctrine was formulated there was little scope for further Initiative (with a capital 'I' – that is at the level of doctrine) which would result in methods, or the Master Plan being altered. There was however always scope for individual initiative at the level of problem solving to suit the context, as the unfolding story out of Normandy, through the low countries, and to the Rhine shows. Lines of command were invariably inflexible but the new doctrine of command stressed the requirement for this kind of initiative at every level. Changing tactical problems emphasised the necessity for subordinates to be problem-solving in terms of the general intentions expressed in the given plan within a methods framework that would now be set out in Montgomery's pamphlets which encapsulated 21st Army Group thinking and practice and subordinates were encouraged to go beyond the official War Office textbook approach.

5.5 Summing up what some of these new ideas and dimensions of practice were, and Monty's new contributions

The defeat at Arnhem had significant consequences for the operational and tactical methods of 21st Army Group. After Arnhem Montgomery realised there would be no easy or rapid advance into Germany. This coincided with a pause in major and spectacular British operations. Montgomery's aim was to improve the performance of his infantry divisions and armour in battle across all three of the variables at play throughout this period. To realise his operational level aims he chose to rely on ingenuity or conceptual superiority.

A two-way interaction between lower level commanders and those alongside and above them continued to operate to shape operational doctrine and practice. With the need to fight through the Siegfried Line after the failure of the Arnhem operation, Montgomery realised exactly the level of

close cooperation that would be required between armour and infantry and he really gripped the problem. A situation had arisen in which the perception had grown among tanks and infantry that it was the job of the other to defend them as they did their job of attacking. This was what Montgomery was trying to change, replacing it with the idea that there should be one common, offensive purpose. Following on from this, at the tactical level, he sought to shape and manage the expectations of infantry and armour as to what each could achieve in order to ensure effective coordinated mutual support. Thus, it was also necessary to consider armour and infantry unit organisation and structure. After Normandy the ideas – which can be associated with particular individuals – had widely come to be accepted as the right ones in 21st Army Group. He was interested in people who could tell him what would work. His main idea was to be so quickly responsive to circumstances as to be able to bring about consequences that would lead to a change of circumstance.

While there had been a general dynamic, or process in which Montgomery sought to impose his tactical view, and while that view was ostensibly accepted at corps level and at divisional level, a more complex set of relations between people, circumstances and equipment meant that key contributors from the corps and divisional levels – and below, in the case of the commanders of independent tank and armoured brigades supporting divisions – were also important in the course of shaping the final doctrine. The development of a common armour-infantry tactical doctrine was collaborative among these brigade commanders and between commanders and the Commander-in-Chief.

Commanders who realised that these lessons were the right ones, such as Barker, needed no convincing: in mid- to late 1944, circumstances changed, requiring new responses. After Normandy, British armour, moving at breakneck speed, spearheaded the power drive across northern France into the Low Countries in August and September 1944. Then circumstances changed again. The performance of Clarkeforce in southern Holland in October 1944 showed Montgomery a way in which his numerical superiority in tanks – most of them in independent brigades, including the three independent tank brigades principally equipped with Churchills – could be brought to bear, opening up again the possibility of mobile operations on a

decisive scale. The role of tank brigades had long been bound up with what had been traditionally understood to be a distinct phase of operations, which ended with the infantry established on their objectives. Barker's promotion, subsequent to the success of Clarkeforce, the armour- infantry force pushed through a gap made by 49th Division supported by the tanks of 34th Tank Brigade, signalled the ongoing commitment to the battle that was now expected of the tank brigades as well. For all senior officers, and the commanders of every type of armoured formation, this had considerable implications for speed of thought and action within operations and the sequencing between phases of operations. However, lessons learned by British commanders from combined armoured and infantry operations in the final months of 1944 show a dynamic relationship between problem-solving and the framework within which problems could and should be solved.

1 Buckley, *British Armour, Normandy, 44*, p. 40.
2 In which substantial Polish forces were also heavily involved.
3 TOTALIZE: Appreciation and Outline Plan by G.O.C. 2 Cdn Corps, 1 August 44, quoted in Canadian Military Headquarters Historical Section, Report No. 65 (*Canadian Participation in the Operations in North-West Europe, 1944)*, 23 December 1953 http://www.dnd.ca/hr/downloads [accessed 22 March 2011] (Para. 17).
4 Simonds set out the technique that he intended to employ in his operational policy directive of February 1944. Simonds is the only one of Montgomery's corps commanders for whom we have such a document.
5 Lt.-Gen. G.G. Simonds, 'Operational Policy – 2 Cdn Corps', paras 13 and 16, quoted in T. Copp, *Fields of Fire*, Appendix A, pp. 273, 274 and 275.
6 Lt.-Gen. G.G. Simonds to Maj.-Gen. R.F.L. Keller [GOC 3rd Canadian Division], 2 August 1944, quoted in *Canadian Participation in the Operations in North-West Europe, 1944* (Para. 19).
7 Interestingly, Simonds would pioneer the use of another form of this tactical combination – this time using the amphibious Sherman DD in tandem with the Landing Vehicle Tracked, or Buffalo, during Operation INFATUATE (1-5 November 1944) – the attack on Walcheren island in the Scheldt estuary.
8 These aspects of Simonds' operational approach have been noted as factors contributing to the failure, before TOTALIZE of the Canadian operation, SPRING (25 July 1944): B.H. Reid, *No Holding Back: Operation Totalize, Normandy, August 1944* (Toronto: Robin Brass Studio, 2005), p. 56.
9 Maps of the Canadian offensive can be found online in C.P. Stacey's *Canadian Participation in the Operations in North-West Europe, 1944*, available at the Historical Section, Canadian Military Headquarters site: http://www.cmp-cpm.forces.gc.ca/dhh-dhp/his/oh-ho/detail-eng.asp?BfBookLang=1&BfId=29 (accessed 13th April 2015).
10 This was unlike other Canadian armoured formations employed in TOTALIZE, such as 2nd Canadian Armoured Brigade, which had accumulated considerable experience of fighting in

Normandy.

11 Reid, *No Holding Back*, p.171.

12 C.L. Mantle and Lt.-Col. L. Zaporzan, 'The Leadership of S.V. Radley-Walters: The Normandy Campaign', *Canadian Military Journal*, 1 (2009), 56-67 (pp. 59 and 63).

13 Maj.-Gen. S.V. Radley-Walters, quoted in Mantle and Zaporzan, 'The Leadership of S.V. Radley-Walters', p. 60.

14 Reid, *No Holding Back*, p. 237.

15 UKNA, WO171/601/300247, 4th Armoured Brigade War Diary, 19 August 1944.

16 IWM, Montgomery Papers, 129/1, Memorandum on British Armour', 6 July 1944, para. 2.

17 Ibid., para.6.

18 General Sir David Fraser, *And We Shall Shock Them: The British Army in the Second World War* (London: Hodder & Stoughton, 1983), pp. 342-43.

19 Montgomery, *Memoirs*, p. 302.

20 Exemplified in the two accounts by 11th Armoured Division and by the East Yorkshire Regiment, a part of 3rd Infantry Division, of the liberation of Overloon and Venraij in October 1944: [Palamountain], *Taurus Pursuant*, p.70; Lieut.-Col. P.R. Nightingale, *The East Yorkshire Regt. (Duke of York's Own) in the War 1939/45* (Howden: Mr. Pye Books, 1998 [1952]), p. 227.

21 Baynes, *Forgotten Victor: O'Connor*, p. 225.

22 Ibid., p. 226.

23 Anon. [Lieut.-Col. J.G. Hooper], *The River Rhine to the Baltic Sea: Operations of Eighth Corps, March-May 1945* (Germany: Privately published, c.1945), p. 7.

24 Hastings, *Overlord*, p. 275; Roberts, *Desert to Baltic*, p. 196.

25 WSRO, Whistler Papers, 9/48, personal diary, 6 October 1944.

26 WSRO, Whistler Papers, 9/48, personal diary, 25 September and 6 October 1944. (Emphasis in original).

27 Roberts, *Desert to Baltic*, p.214.

28 Ibid. p.214.

29 WSRO, Whistler Papers, 9/48, personal diary, 12 December 1944.

30 Quoted in N. Scarfe, *Assault Division: A History of the 3rd Division from the Invasion of Normandy to the Surrender of Germany* (Staplehurst: Spellmount, 2004 [1947]), pp. 193-4.

31 WSRO, Whistler Papers, personal diary, 12 December 1944.

32 WSRO, Whistler Papers, personal diary, 6 October 1944.

33 COMPASS epitomises what militaries today call the deep thrust or deep penetration. Deep penetration constitutes part of the essential character of the NATO general strategy known as the AirLand Battle.

34 Roberts, *Desert to Baltic*, p.219. (Emphasis added).

35 Ibid., p.219.

36 WSRO, Whistler Papers, 9/48, personal diary, 18 October 1944 [and subsequent quotations in this paragraph].

37 WSRO, Whistler Papers, 9/48, personal diary, 26 October 1944.

38 However, faction at the highest levels played a significant and underrated part in O'Connor's removal from command. It was not until Floyd, whose background was in the glamorous 15th/19th Hussars, had been removed from O'Connor's side, being promoted and posted to Italy, that O'Connor himself was finally levered out of his command; see S. Badsey, 'Faction in the British Army: Its Impact on 21 Army Group Operations in Autumn 1944', *War Studies Journal*, 1(Autumn 1995), 13-28 (p. 19).

39 [Hooper], *Eighth Corps: Rhine to Baltic*, p. 8.

40 Many of O'Connor's ideas on equipment only came into their own in the 1950s when his active

career was over, e.g. the 1950s can be thought of as the ‘APC decade’ – epitomised (in the British Army) by the introduction in the ‘50s of the Saracen and Trojan armoured personnel carriers.

41 Roberts, *Desert to Baltic*, p. 220.

42 Baynes, *Forgotten Victor: O’Connor*, p. 183.

43 Lieut Col. Sir John Baynes, Bt. to the author, 5 July 2004.

44 Barker MSS, Maj.-Gen. E.H. Barker to his wife, 26 October 1944.

45 XII Corps was to be involved as well as VIII Corps. Operation NUTCRACKER began on 14 November in XIII Corps’ area. On 19 November VII Corps started to advance and the task of clearing the pocket was slowly completed by the beginning of December.

46 Under the command of Brig. W[illiam] S[tanhope] Clarke, who commanded 34th Tank Brigade.

47 In support of this argument, Carver noted that ‘34 Tank Brigade under 49 Div[ision …] achieved a great deal, again with tanks as the primary arm, supported by infantry’. IWM, Carver Papers, Lectures and Articles on Armoured Warfare 1940s, ‘Comments on Lt. Col. [Alan] JOLLY [RTR]’s letter’. Perrett’s historical account also notes: ‘these operations are unique in the history of infantry/tank operations, for they involved the use of Churchills in an *exploitation* role’ (B. Perrett, *Through Mud and Blood: Infantry/Tank Operations in World War II*, (London: Robert Hale), 1975, p. 233 – emphasis original).

48 Barker MSS, Maj.-Gen. E.H. Barker to his wife, 27 October 1944.

49 Barker MSS, Maj.-Gen. E.H. Barker to his wife, 2 November 1944. It is in this light that we should interpret the following: ‘I have had no reply from Monty to my letter [of 26 October, saying he would prefer to stay with 49th Division rather than take over command of VIII Corps as Montgomery wanted] and don’t expect one. Instead he has sent me a personal signed copy of a pamphlet he has written on the Conduct of War and the Infantry Div[ision] in battle. Having glanced through I feel it is quite unnecessary *for me* to read it!!!’. (Italics added, exclamation marks original.)

50 Barker MSS, Maj.-Gen. E.H. Barker to his wife, 8 October 1944; 19 November 1944.

51 Barker MSS, Brig. W.S. Clarke to Lieut.-Gen. E.H. Barker, 16 December 1944.

6

Understanding the Interaction of Montgomery, Key Commanders and Circumstances in late 1944 and before the Rhine Crossing

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6.1 From ‘anarchy’ to problem-solving

The creation of doctrine and of an appropriate command philosophy was the result of the interaction of several factors: the actions of Montgomery, who ‘managed’ the output, of other officers at differing levels in the chain of command, and of ‘circumstances’. The interaction of Montgomery, key commanders and circumstances led to the emergence of a new framework for action through which previous experience could be successfully reinterpreted and brought to bear effectively. This framework drew its inspiration from the general way the British Army attempted to adjust official doctrine to lessons learned from operations but the machinery for it was specific to 21st Army Group. Whilst being unique to Montgomery and 21st Army Group, it appears to have been largely generic within the whole of that Group under Montgomery’s command.

In this process, in shaping a new framework for action through which previous experience could be successfully reinterpreted, the importance of Montgomery’s interaction with key contributors below the higher levels of command has hitherto been largely overlooked. It is the crux of this book that it was Montgomery’s adoption of a problem-solving approach – which he adopted in response to the problems of fighting in Normandy and through the Low Countries – in which he emphasised the importance of context but also, importantly, allowed for the diverse views of other commanders to be

managed, which led to ultimate success in North-West Europe. This chapter will help to make clear the start of the process by which that happened, which will then be expounded in the subsequent two chapters (Chapters 7 and 8).

6.2 Montgomery intervenes in several ways

Montgomery's efforts to elucidate the lessons of the campaign played no small part in creating a common, single, 'unified' doctrine. He developed his ideas in doctrinal pamphlets in November and December 1944. Montgomery emphasised the need to learn from combat experience, in part expecting his commanders to learn from their own experiences. He was now also asking them to learn from the experience of others. However, he also believed that, from his experience, he had the fundamentals of an effective operational doctrine. He was not so much interested in changing what he regarded as his proven methods as he was in finding ways to make them work better. He was interested in people who were trying to make things work, who could tell him what would work. In his pamphlets, which Montgomery designed to be authoritative aids to the implementation of this 'new' doctrine, he identified the problems of fighting with the tools at his disposal and indicated how he believed they should be tackled in the remainder of the war against Germany. Further, the pamphlet writing process itself provided the intellectual and doctrinal substance of his command system.

The other part of his command system was actually managing the people to do it. Montgomery's way of trying to produce 'the result' was ruthlessly to remove from command officers he thought were likely to be in disagreement as he sought to impose a mould of agreement or consensus. Thus he got rid of people who seemed to question the methods he promulgated or could not perform them. His treatment of O'Connor was an example of the former, and of Bucknall of the latter. A key question, therefore, is what was the real difference between O'Connor's record of handling VIII Corps and Montgomery's ideals. While the operational methods both men adopted were the same in basic character insofar as neither had any option, or desire but to employ operational techniques that put a premium on minimising casualties, there were also at least three important differences which can be identified

between their respective approaches. Further, without looking back too far, it is necessary to investigate the particular kind of past experience Barker represented and how that combination related to that amalgam of qualities, capabilities and attitudes that Montgomery wanted in his corps commanders.

First, O'Connor and Montgomery differed in their views on the way infantry accompanying armour should be tactically mounted. As the British armoured division moved towards a balance of fewer tanks and more motorised infantry, the Lorried Infantry Battalions of the infantry brigade of an armoured division appeared, in addition to the Motor Battalion attached to the division's armoured brigade. These were based on standard infantry battalions, carried in a new type of vehicle – soft-skinned and not armoured. The concept of mechanised infantry in their own bullet-proof cross-country vehicles was one to which O'Connor became a convert to during the Normandy fighting, championing their introduction. It will be recalled that, before Operation GOODWOOD began he had anticipated the need for the infantry to keep up with the tanks and at the same time be protected against enemy fire, which made movement by lorry unsatisfactory. On 16 October 1944, as CONSTELLATION was moving into what should have been its final phase, he wrote to his old Cameronian friend Major-General J.F. Evetts, a special adviser to the Ministry of Production, asking him to press for the development of an 'armoured carrier for the carriage of infantry into battle'.[1] This was a 'hard' or engineering approach to problem-solving. Montgomery, on the other hand, rather than wait to explore whether or not there was sufficient time to develop completely new vehicles, put his faith in the first instance in what a member of his staff has described as his ' "training' philosophy" ', a common doctrine incorporating better techniques of armour close support and infantry close protection, widely understood and brought to an adequate level of efficiency through training.[2] This 'soft' approach – the view that it is not what you have but how you use it – reflected Montgomery's method of command. If the ideal technical equipment had been available it might be argued that Montgomery would not have needed to have gone down this road of 'being better', as opposed merely to 'having better'. Of course Montgomery allowed wide latitude to those who he deemed performed well, such as the Canadian commander Simonds who had

used M7 ‘defrocked Priests’ (Kangaroos) as troop carriers during TOTALIZE and, during the Scheldt operations mounted infantry in Buffalo amphibious vehicles. The solution that would emerge in actuality amongst the British units emphasised morale and addressed equipment and numbers as well as the way the Germans were now fighting.

Secondly, Montgomery and O’Connor differed over what Montgomery termed ‘the Initiative’. Where O’Connor was prepared to work within existing norms and practices, and leave decisions on the actual methods of fighting – and of dealing with anticipated problems falling entirely within the province of fighting – to unit commanding officers, Montgomery was not. Thus, for Operation SPRING (25 July 1944), even though he believed his armoured commanders had not developed the knack of combining armour and infantry in a mutually supporting manner, O’Connor felt the need to do no more than advise Adair to ‘remember what you are doing is not a rush to Paris – it is the capture of a wood by combined armour and infantry’.[3] During BLUECOAT, both Roberts and Adair divided their divisions into two brigade groups. The new ‘mix’ of infantry battalions and armoured regiments in mutually supporting combinations worked. O’Connor was extremely pleased with these armoured commanders, praising Adair and Roberts – the latter who he recognised had been ‘bewildered at the start by infantry’ – to his confidant, erstwhile BGS and now Alexander’s Chief of Staff in Italy, Lieutenant-General Sir John Harding, not only for doing well but also for learning a great deal.[4] Ultimately, however, what constituted ‘good tactics’, i.e. the right, or next thing to do in any situation, or set of circumstances during the fighting was left to the discretion and judgement of unit commanding officers. O’Connor was much more prepared than Montgomery to work in this way. Montgomery, by contrast, was seeking more of a step-change within the existing culture and the norms and practices of the Army. As will be seen in the next chapter, to Montgomery the Initiative meant that operations developed according to a predetermined plan. It was necessary quickly to gain the Initiative, and then to keep it by ‘ascertaining the facts of the situation *at that time,* and then making […] plans to deal with the problem’.[5] Of course, at high level this would likely involve major decisions. For Montgomery, however, each commander, however senior or junior, must

be clear as to the points which mattered on his own level. It was crucial for a commander to position his ready ‘reserves’ or sufficient forces appropriately so as to block anticipated enemy countermoves swiftly. Skill in grouping, and the precept that initiative in quick re-grouping to meet the changing tactical situation played a large part in successful battle operations, ensuring that operations developed according to plan. Thus, while the Initiative was also one of Montgomery’s general principles and a central part of his doctrine of command, it was, he believed, by the ‘initiative of subordinates that the battle is finally won’.[6]

A final difference between Montgomery and O’Connor was in the nature of the role the two envisaged for the armoured division in battle. In CONSTELLATION 3rd Division was to operate towards Overloon and Venraij; 11th Armoured would pass through them and advance on Amerika to the right and Horst on the left, after which a further thrust was envisaged in the direction of Venlo. O’Connor was thus prepared to contemplate an exploitation of this ‘empty’ flank by the armoured division. However, a sizeable number of the tanks of King’s Royal Hussars (15th/19th H) which tried to operate unsupported towards Amerika on 19 October were destroyed by Panzerfausts or Panzerschreck anti-tank rocket-launchers, or anti-tank guns. They could perhaps gain, but certainly not hold, their objective. By this time, Montgomery opposed the concept that armoured divisions should operate independently to attempt the major turning of a flank and any idea that tank units should manoeuvre independently and unsupported. Instead, he saw the armoured division as a combined arms force that would seize key terrain in order to use the advantages of being on the defensive when the enemy counterattacked. Montgomery’s was the more integrated concept. But, this meant changing the ‘geometry’ of the whole system, and putting aside the separate armoured brigade and infantry brigade structure of armoured divisions in favour of more fluid arrangements, while still maintaining ‘balance’. Thus, Montgomery’s solution to the problem of balance with this organisation of forces – and indeed now generally – was to change the existing notion of a force balanced by reserves to one so balanced that there will never be any need to react to enemy thrusts with large reserves. The homogeneous-brigade/regimental brigade group organisation had been put in

place by several armoured divisional commanders. This approach used up what had traditionally been considered reserves. Montgomery's contribution was to make the homogeneous brigade concept reconcilable with his concept of balance.

Barker was the only British divisional commander in Montgomery's 21st Army Group to be appointed to corps command during the campaign in North-West Europe. It will be recalled that in the 1920s and 1930s the British Army experimented to produce an army capable of mobile combined arms action. These were not experiments in which Montgomery was directly or even closely involved. Others, such as Barker, were more closely involved in the practical combination or integration of the various arms.[7] The decision had been taken to discard the tank lead in favour of motorising the entire army. Thus at the start of the Second World War the British Army was entirely motorised but lacked a large modern armoured force. A large British armoured force had then been built up, and by mid- to late 1944, the pressing question was how to use not only the armoured divisions but also the independent brigades which were its largest component part. Experience and practice from the Western Desert informed training in the UK. It was official policy, however, and recognised in the Home Forces that the application of lessons from the desert needed some caution. The appointment of Barker (by Brooke on Montgomery's recommendation, and over a number of other candidates who were considered) can be seen as representing the re-emergence of the influence of that part of the army which had never been committed in the Mediterranean theatres, as opposed to the (ex-) 8th Army in North Africa and Italy, and with it of pre-war concepts of more balanced tank-inclusive mixed forces and of the light infantry tradition (as protective mobile infantry) rather than that of mechanised infantry.

Doctrinally and organisationally, therefore, there were still problems that had to be solved. The earlier innovation of homogeneous, or mixed brigade groupings composed of mutually supporting infantry and armour only applied to the armour and infantry of the armoured divisions. The infantry divisions had to rely on the independent tank brigades for support. Montgomery's idea was to make all the tank brigades into armoured brigades each capable of tactical infantry cooperation and exploitation. Barker's contribution – the

lessons inherent in the two operations described – was to develop the role of tank brigades away from simply the close support of infantry in attack or defence. It was, therefore, an innovative tactical application of the armour of a tank brigade which tied in very well with what Montgomery envisaged as the new role for tank/armoured brigades. This was the employment of armour-with-infantry in fluid mobile warfare of the kind Montgomery thought most appropriate in the circumstances, as opposed to the kind O'Connor wished to impose on the Germans.

6.3 Command, doctrine and organisation for and in the advance to the Rhine

By the winter of 1944-45 the putting into practice of operational doctrine on the ground had changed. To understand and illustrate in detail what had happened requires exploring practice in four dimensions: that of an independent armoured brigade (Carver and 4th Armoured Brigade) operating as the armoured brigade of an armoured division (Roberts and 11th Armoured Division); of an armoured division (Lyne and 7th Armoured Division); of an independent armoured brigade (Clarke and 34th Armoured Brigade) operating in the infantry-support role; and of an independent armoured brigade (Greenacre and 6th Guards Armoured Brigade) operating in a new way.

New 'best practice' was embodied in the methods employed by 4th Armoured Brigade, and its activities provide a checklist of these methods.[8] By early 1945, 7th Armoured Division had recovered from its 'stickiness' in time to play a significant part in the battle for Germany. For this reason, 7th Armoured Division's performance (out of the three British standard armoured divisions in 21st Army Group) is selected for most attention. Substantive progress in a process of improvement was because of its new commanders and the new methods. By the time of the assault across the Rhine, at the end of the 'into Germany' phase, the situation for 21st Army Group's final advance to the Baltic and the Elbe was as follows: for some significant players of sufficient importance to have made them members of our small group of commanders, the new offensive techniques replaced the old.

Further, key examples make it clear that new and replacement commanders coming to prominence were tending to adopt the new methods.

Since mid-December 1944, 4th Armoured Brigade had been the armoured brigade of an armoured division, 11th Armoured Division, in place of 29th Armoured Brigade which had gone to re-equip with British Comet tanks instead of their American Shermans.[9] This shows that the Sherman-equipped independent armoured brigades were now regarded as being completely interchangeable with the armoured brigades of armoured divisions. In Normandy, tank-mounted 17-pdrs had been in short supply but this new development reflected the growing availability of Sherman Fireflies: each of 4th Armoured Brigade's armoured regiments now had twenty-four, a proportion which had doubled since D-Day and Fireflies now made up half of each troop.[10] It was now possible to engage and defeat the German heavy tanks and tank destroyer variants on more equal terms.

Plate 10 Lieutenant-Colonel P.R.C. Hobart, CO 1st Royal Tank Regiment in his Comet A34 Cruiser tank 'Iron Duke'. Hobart was a highly competent officer, who went on to have an important role in the post-war army. The photograph allows us to note the Comet's effective 17-pdr (77mm) principal armament (photo Tank Museum 6284-D1: reproduced by kind permission of the Tank Museum, Bovington, Dorset).

Plate 11 Sherman Firefly (centre), closely followed by a ‘standard’ Sherman, during the advance into Germany in late 1944. The much longer barrel of the Firefly’s 17-pdr gun and the armoured radio box on the rear of the turret made it stand out among standard Shermans. In this interesting, moving, action shot, it is clear that every effort has been made to disguise the length of the barrel. The radio box would also appear to be camouflaged with branches. (photo Tank Museum 7417-A2: reproduced by kind permission of the Tank Museum, Bovington, Dorset).

Operation VERITABLE and its subsequent development Operation BLOCK-BUSTER, launched into the Reichswald Forest east of Nijmegen on 8 February 1945 with a view to possessing all the ground west of the Rhine during the Anglo-Canadian offensive into the Rhineland, and which culminated as British and Canadian forces reached the river Rhine, constituted the scene for the further testing of the new offensive techniques. VERITABLE/BLOCKBUSTER began on 26 February 1945 when II Canadian Corps started its attack on the Germans’ defensive system east and south-east of the Reichswald. Carver’s brigade was operating as the armoured brigade of 11th Armoured Division, the right division of II Canadian Corps. The new homogeneous armoured-infantry division now consisted of two brigades, each of two armoured regiments and two infantry battalions (see Figs. 1 and 2 in Chapter 4). In conformity with this, to create the homogeneous armoured-infantry organisation, 4th Armoured Brigade’s 3rd/4th County of London Yeomanry armoured regiment (3rd/4th CLY) were

‘loaned’ to 159th Brigade, 11th Armoured Division’s ‘in-house’ infantry brigade, in exchange for the 4th Battalion King’s Shropshire Light Infantry (4th KSLI) coming to 4th Armoured Brigade. The15th/19th H from 11th Armoured’s Armoured Reconnaissance Regiment was employed as the ‘fourth’ armoured regiment required to make up the two homogeneous brigade-structure. 4th Armoured Brigade participated in the attack on ‘the Schliessen [*sic*. Schlieffen?] line’ (1-3 March 1945) during BLOCKBUSTER when it found itself in ‘thick woods, full of bazookas [*sic*] and infantry, supported by a few SPs’.[11] This attests to the Germans’ continued extensive use of tank-hunting parties as in the Reichswald. It also provides clear evidence of the nature of the techniques now being employed to overcome terrain and enemy. In their main characteristics they were those which were generalised by Montgomery. The exposition of the combat narrative demonstrates that the methods employed in breaching the Schlieffen line embodied new best practice.

The importance which Montgomery and others attached to achieving a higher tempo of operations has already been noted. Montgomery’s obsession with remaining ‘balanced’ throughout his operations was a product of his need to keep the Initiative, and constantly – ideally – to create new reserves so that he had the troops on hand to mount the next thrust. Thus a most important way momentum was maintained during the Schlieffen battle entailed moving armoured regiment-infantry battalion groups through each other: that is passing each group through its predecessor. In the fighting in Normandy, even experienced commanders had sometimes been caught out this way. Thus, Major-General T.G. Rennie who had commanded 6th Black Watch in the desert, 154th Brigade in Sicily and 3rd Division on D-Day had assumed that the capture of Tilly-la-Campagne during TOTALIZE [7-8 August 1944] – once it had been bypassed and cut off – would require only one battalion of 152nd (Highland) Brigade, without tank support.[12] The other two battalions of the brigade as well as the other brigades, were given other tasks. In the VERITABLE operation, Rennie’s 51st (Highland) Infantry Division was tasked with clearing the south-west corner of the Reichswald on a 5,000 yard from a start line east of Nijmegen, for which he employed 154th Infantry Brigade with 5th/7th Gordon Highlanders in support:

> The 1th Battalion Black Watch start the attack, and occupied Breedeweg. […] It was dark as she come on the surroundings of the forest, and come in heavy fightings with the German 122th Grenadier Regiment and the advance was stop here. One Battalion of the reserve brigade, the 7th Argylls and Sutherland Highlanders take over the attack [.][13]

Thus, by the time of his penultimate battle, Rennie had learned from earlier mistakes.

Early in the evening of 26 February 1945, the Royal Scots Grey (Greys) and 4th KSLI crossed their start line and soon made their first objective. The attack was continued through the night of 26/27 February. By the morning of 27 February, they had reached the railway line south-west of Udem. At first light, 44th Royal Tank Regiment (44th RTR) and 2nd KRRC passed through the Greys and 4th KSLI. Thick woods ran all along an open right flank. About midday, 3rd/4th CLY and 3rd Battalion Monmouthshire Regiment (3rd MONS) passed through 3rd Canadian Division, which had taken most of Udem, to capture the ridge south-east of the town. By late afternoon, they had reached the upper slopes of the ridge, 44th RTR and 2nd KRRC clearing the woods on the right flank and linking up with them. Fighting continued during the night. By early afternoon the following day, 3rd/4th CLY and 159th Brigade Group succeeded in forming a bridgehead over the stream beyond the ridge. The 159th infantry, (1st Herefords) and 2nd KRRC were then relieved by infantry of 3rd Canadian Division. In late evening, 15th/19th H and the Herefords passed through and just beyond the forward positions they met the first Schlieffen defences.

On 1 March, 4th Armoured Brigade concentrated east of the stream, under cover of smoke, its supporting artillery coming into action. Following an unsuccessful attack by a single squadron of 159th Brigade Group to break out of the bridgehead east of the small stream beyond and south of the Gochfortzberg feature earlier in the day, it was decided that a hard blow should be launched in accordance with the principles of surprise and concentration. In mid-afternoon, 4th Armoured Brigade attacked the Schlieffen line, 44th RTR and 2nd KRRC on the right and the Greys and 4th KSLI on the left. While the right group made slow but steady progress, the left group was unable to get forward until they had turned north, established a new start line and re-started their advance. This took till well into the night.

Meanwhile 44th RTR and 2nd KRRC had closed right up to the line.

The dispositions and manoeuvres by means of which contact was made with the enemy are as significant for present purposes as are those which are part of the fighting. Thus 4th Armoured Brigade, concentrated in full-strength east of the stream, attacked the line mid-afternoon in two groups, seeking to gain surprise through unbalancing the enemy with this method of attack and confusing him as to ultimate plans and intentions. The essence of Montgomery's military doctrine was to 'unbalance the enemy by manoeuvre while keeping well balanced [oneself]'.[14] The emphasis he placed on employing the alternative thrusts approach flowed from all of this, as did his view of the armoured division.

During the night the Greys and 4th KSLI attacked southwards. It is significant that, having seized the Hochwald feature and the high ground north of Sonsbeck on the morning of 2 March, the Greys and 4th KSLI prepared to receive, then decisively defeated, a counterattack by the enemy and consolidated their gains, creating a firm base for a further bound forward, because of Montgomery's view, seen earlier, of an armoured formation as a combined arms force that would seize key terrain in order to use the advantages of being on the defensive when the enemy counterattacked. In the afternoon, that night, and the following morning, 44th RTR and 2nd KRRC successfully cleared the southern end of the line, which effectively ended 4th Armoured Brigade's battle of the Schlieffen. The whole battle epitomises what will later be seen as the classic 'new style' action in the spirit of Montgomery's pamphlets, where he would write that the armoured commander must therefore have: 'a clear tactical picture in his mind at all times in order that he may grasp quickly a fleeting opportunity'.[15]

It is important to note that Operation TOTALIZE, mounted by Simonds' II Canadian Corps – to which 4th Armoured Brigade was now attached for BLOCKBUSTER as part of 11th Armoured Division – had involved a plan for a daring tank-cum-infantry night attack in conjunction with aircraft which took the enemy by surprise. Simonds' concept for TOTALIZE was to crack the German defences in two phases and then to exploit towards Falaise with his armour. The idea that fighting around the clock with armoured forces could be an answer and should be usual was something new. British armour

in Normandy usually withdrew just behind the front line to laager once darkness fell; also, the overnight ‘First Phase’ advance was a one-off in the plan for the TOTALIZE operation.[16] In the present battle, 4th Armoured Brigade operated by day and by night. The initiative of Roberts and Carver in pressing the advance by day and by night was new best practice.[17] In Carver’s and indeed, the other accounts of this combat episode by those at this middle level of command ‘all went like clockwork’.[18]

After completing his work for Montgomery on the pamphlet *The Infantry Division in Battle*, Major-General L.O. Lyne temporarily, briefly commanded 50th (Northumbrian) Division, then 7th Armoured Division for the remainder of the war against Germany. In October 1944, Whistler asked himself ‘what can have happened to the Desert Rats. Their name stinketh to heaven’.[19] Although they had played a prominent role in the advance across France and Belgium, there was a widespread perception among 21st Army Group commanders that when it came to anything but the exploitation role – as during the ‘Great Swan’ across France and Belgium – 7th Armoured Division was something of a ‘problem’ division. This was the situation Montgomery sought to address in November 1944 with Lyne’s appointment.[20] Lyne’s career was unique among Montgomery’s lieutenants – he was the only commander in 21st Army Group to command infantry divisions and then an armoured division – and it is intensely interesting for this reason. Certainly, the weight of evidence suggests that, so far as re-organisation and changes in respect of armour were concerned, Lyne was an ‘implementer’ rather than an ‘innovator’.

From an analysis of Lyne’s command and operational decision-making it is possible to further establish how Montgomery wished the armoured divisions to function in the remainder of the war. If the Sherman-equipped independent armoured brigades were now regarded as interchangeable with the armoured brigades of armoured divisions, the corollary was the expectation that the armoured brigades of armoured divisions would now be able effectively to discharge the independent armoured brigades’ role of infantry support. It had previously been thought that to compensate for their slow movement whilst closing the range, as the role of infantry support demanded, a heavily armoured tank would be required.

The first task Lyne set himself was to return 131st Infantry Brigade to full strength. By this time the shortage of trained infantry was so chronic that the number of rifle companies in each battalion had fallen to two, of between one and three platoons each. Informal, more direct communication with Montgomery apparently allowed Lyne to fill out the four rifle companies in each battalion to full strength, each composed of three platoons.[21]

For Lyne, the most important thing now was ‘to get the relationship between infantry and armour back onto a proper basis’.[22] He quickly realised that a certain amount of mutual distrust existed between infantry and armour. From his past experience in Normandy, Lyne had concluded that ‘the importance of infantry working with tank units, with whom they have previously trained and been able to establish a basis of mutual confidence, cannot be too strongly stressed’.[23] Accordingly he now started a system of affiliation between armoured regiments and the ‘new’ infantry battalions – 2nd Battalion Devonshire Regiment (2nd Devons) and 9th Battalion Durham Light Infantry (9th DLI) – to ensure closer cooperation. This reflected past experience and was now standard practice in the two other standard British armoured divisions.

In Normandy, the infantry brigade in 7th Armoured Division and the armoured brigade cooperated at times very closely through what can be called a flexible mixed brigade system. This was mainly at squadron/company and troop/platoon level. At the small unit level this may have resulted in similar levels of cooperation. However, what Roberts had been practicing was cooperation at a much higher level. Nevertheless, elements of the two brigades had been mixed so that they formed armour-infantry groups of mutually supporting individual tanks and infantry.[24] In Normandy, these were not formally brigade groups as such, but they were in essence. A reasonable case can be made that they reflected a view among the armour in 7th Armoured that interaction with the infantry would always be a temporary arrangement. Towards the end of 1944, Montgomery’s removal of ‘blockers’ such as Erskine and Hinde represented a definite and determined attempt to replace people who had one kind of past experience as practitioners. In spite of this, Lyne was aware of ‘a tendency in some quarters [i.e. among the armour] to regard the Division as so veteran and battle-

worthy that re-training to meet new conditions was unnecessary'. This Lyne 'firmly stamped on'.[25] Brigadier A.D.R. Wingfield was CO 22nd Armoured Brigade from November 1944. His view at that time was that:

> an armoured division is the modern strategic cavalry; and, as such, is designed for strategic reconnaissance and exploitation. In these operations (Alan and Colin) the role of 7th Armoured Division was exploitation; but in the early stages of the attack (Alan) its tanks were used for close support of the infantry assault. This was justifiable in the event as the enemy resistance had not been unduly strong, and had been brief. Heavy tank casualties had not been incurred and the tanks had been released from that role as early as possible. Furthermore, the distance to the final objective was comparatively short. Had those factors not prevailed I doubt whether an armoured brigade could have completed the two tasks successfully.[26]

This was a concept which among other things still reflected the 'cavalry concept' of armoured warfare and the doctrinaire British view of the roles of armour as alternates – either infantry-support or cavalry/exploitation – requiring two different types of formation each equipped with a different kind of tank. Lyne was trying to implement a different view: that these must be seen as alternating roles of all armoured formations. Finding a fourth armoured regiment by moving the 8th Hussars (8th H), whose task had been reconnaissance, into 22nd Armoured Brigade, Lyne adopted the homogeneous brigade group structure – in practice, if not in theory.

By this stage, there was nothing particularly new in this. This type of brigade group was associated with Roberts particularly but also with Adair of Guards Armoured, as well as with 4th Canadian and 1st Polish armoured divisions. But in at least two significant ways, re-organisation of 7th Armoured under Lyne involved or reflected new best practice, as enunciated by Montgomery formally in his pamphlets, as we shall see in the next chapter.

The first was the attempt by Lyne to address, if not once and for all then certainly before the resumption of mobile operations and the final assault on Germany, what an armoured division like 7th Armoured Division was for. This involved addressing the position adopted by Hinde following the early difficulties in Normandy, that the country was 'unquestionably one' for the infantry supported by tanks, not for tanks of an armoured division such as 7th Armoured with a small supporting component of infantry. Lyne conceded that 'the country [ahead] did not hold out much hope of successful armoured

Divisional tactics as usually taught in the training pamphlets'. However, this was not what was now being taught in 21st Army Group. Lyne was at pains to rub in that 'our job was to fight and succeed in any kind of country under any conditions'; and to make it clear that the shortage of trained infantry everywhere meant an armoured division could not 'allow itself the luxury of keeping a certain type of formation [i.e. the armoured brigades] "on ice" for a particular form of operation'.[27] Close cooperation with infantry had hitherto been primarily the responsibility of 21st Army Group's tank brigades – mainly equipped with the Churchill. Montgomery had long decided that this was unsatisfactory. In November 1944, Lyne duly established the 7th Armoured Division Battle School 'with much enthusiasm'.[28] From his viewpoint, it 'played a particularly important part in training junior leaders of both armour and infantry in a common doctrine'.[29] What was required, Montgomery believed, was armoured formations capable of 'ubiquitous' use, equipped and trained accordingly.[30] Lastly, as a result of experience gained during 7th Armoured Division's participation in Operation BLACKCOCK (15-21 January 1945) to eliminate the German salient south-west of the river Roer between Roermond and Geilenkirchen, Lyne reorganised the (131st) Infantry Brigade H.Q. and included the necessary command tanks and signal facilities to put it on an equal footing with the (22nd) Armoured Brigade and capable of commanding any combination of infantry and armour.[31] Thus, 7th Armoured Division finally came into line with the other two standard armoured divisions. In Lyne's view, during Operation BLACKCOCK 'the tanks had succeeded in giving really good close support to the infantry'.[32]

What Lyne did was to reorganise the two arms in a force structure which embodied a better balance between armour and infantry, while simultaneously attempting to encourage in each arm a better, more realistic expectation of what the other could achieve, through nurturing a common doctrine. However, the ubiquity of role of the Sherman-equipped armoured brigades did not bring about the eclipse of the tank brigades equipped with the Churchill that Montgomery had anticipated. The example of Clarke and 34th Armoured Brigade operating in the infantry-support role during Operation VERITABLE demonstrates further good coordination and makes it clear as well that this was also perceived to come from 'training together and

getting to know the inf[antry]'.[33] However, the Churchill-equipped brigades' role was also undergoing a process of redefinition to go with their re-designation as 'armoured brigades'. Churchill-equipped armoured brigades took on a new lease of life. It will be recalled that in Normandy it had come to be believed that the objectives of a Churchill-equipped tank brigade could be to use the Churchill's cross-country ability to get into positions where it could not easily be seen, with the object of closing the gap between the superior performance of the German 88mm or long 75mm guns and the Churchill's own armament in order better to support the assaulting infantry. The example of Greenacre and 6th Guards Armoured Brigade also makes it clear that for and in the advance from the Rhine new and replacement commanders coming to prominence were tending to adopt these new methods.

For VERITABLE, two of 34th Armoured Brigade's armoured regiments were placed under command 53rd Division and the third was put under command 51st Division. Ross, GOC 53rd Division, laid it down that armour would predominate in the attack over the open ground from the start line to the forest, and would put the infantry into the Reichswald. However, it was also laid down that 34th Armoured Brigade would support 53rd Division 'in all phases of the op[eration]', that is not just in the tank brigades' traditional role of assisting the infantry to break into the enemy's fixed defences and then retiring.[34] Ross wanted close tank support to the infantry inside the forest both by day and night. The task of 9th RTR, therefore, lay solely in the forest, in support of 160th Infantry Brigade. This required not only the closest cooperation between tanks and infantry but also posed new problems of method (forest fighting tactics and night advances through bush, a type of terrain 'reckoned as tank-proof hitherto').[35] A number of Brigade Conferences were held by Brigadier Clarke to 'determine means of overcoming the several particular problems of the attack', which included participation of the representative of 30th Armoured Brigade, 79th Armoured Division (specialised armour).[36] Relevant factors in the approach to the Reichswald included not only the importance of the actual ground (open) but also its state (mud and mines). Clarke was determined, if necessary, to expend a complete squadron of tanks from 147th Regiment RAC (147th

RAC) getting through the mud and mines before giving up the attempt to lead the infantry to the edge of the Reichswald. The ‘going’ was such that 79th Armoured Division units failed to cross the start line on 53rd Division’s front.

The 34th Armoured Brigade history singles out for particular prominence the performance of 9th RTR in the Reichswald during the night 8/9 February, 1945, when the regiment carried out a fighting advance of 2000 yards with 160th Infantry Brigade to capture the Stoppelberg feature, arriving on the objective ‘up with their infantry’.[37] However, to put the infantry on to their objective – that is into the Reichswald – it had been necessary to attack across an ‘open’ area. In this process, tanks of 147th RAC which had got across an anti-tank ditch took up firing positions in buildings, conforming to the new methods of tank fighting with Churchill-equipped armoured brigades practised by 6th Guards Tank Brigade. Later, in the south-eastern corner of the Reichswald, tanks of 147th RAC took up fire positions and fired heavily from the west on a well-sited, well-defended position which had resisted all attempts to take it the previous day, while infantry from 7th Royal Welch Fusiliers attacked from the south-west. Both these actions can be seen as representing the convergence of the experience of the two armoured brigades (34th and 6th Guards), that is, that the official doctrine which emphasised the close physical proximity of the two arms was inappropriate in these new sets of circumstances (see Plates 12, 13, and 14).

Plate 12 Churchill tanks and infantry preparing to move forward in close proximity during Operation Epsom, June 1944. The perception at the time was that it was the role of the tanks to protect the infantry (photo IWM B 6124: © Imperial War Museum, Lambeth, London).

Plate 13 Infantry protecting the tanks during the advance into Germany, February 1945 (photo IWM B 14608: © Imperial War Museum, Lambeth, London).

Plate 14 Here, we actually have tanks and infantry in a mutually supporting role in Germany towards the end of the war, as described by David Fletcher '[t]he soldiers protect the tanks from Panzerfaust operators lurking in the hedgerows while the tanks cover the infantry and deal with any opposition that might hold them up (*British Tanks of World War II (2) Holland & Germany 1944/1945*, p. 22)' (photo IWM B 4990: © Imperial War Museum, Lambeth, London).

At first sight the formations and tactics employed by 34th Armoured Brigade in the battle of the Reichswald apparently had the outward

appearance of best practice as enunciated in official doctrine and even Montgomery's own pre-D-Day doctrine. However, closer inspection reveals a multi-layered set of reactions to circumstances, which drew both from the more recent experience of Churchill-equipped armoured brigades in Normandy and the encouragement to commanders at lower level to exercise their initiative and be proactive when confronted by new circumstances and new problems of fighting. Thus, it can be seen to be illustrative of the doctrine recently institutionalised by Montgomery. Lieutenant-Colonel P.N. Veale, CO, 9th RTR, in a report – endorsed by Clarke – on close support to infantry in forest fighting, concluded that 'f[or]m[atio]ns and tactics must be varied as much as conditions allow'.[38] This reflected the new general doctrine or best practice for tank-infantry unit organisation and structure in Montgomery's army group.[39]

However, to return to the issue of the typicality or otherwise of each or any of these Churchill-equipped independent armoured brigades it is helpful to compare the tactics and performance of 6th Guards Armoured Brigade with those of 34th Armoured Brigade. These two brigades were, in effect, representative of the 'heavy' armoured brigades of 21st Army Group, and the development, post-Normandy, of specific operational tasks and generic tactics for them is critical. It is important to also bear in mind that 6th Guards Armoured Brigade had, since the Battle of Normandy, a new commander, Brigadier W.D.C. Greenacre, who succeeded Brigadier Sir W. Barttelot (killed in action), who in turn had replaced Verney.

With the renaming of the Churchill tank brigades as Independent Armoured Brigades came a re-organisation, for which appropriate concepts of tactical handling, as well as suggestions to further improve the new organisation, were developed through informal communication between Churchill armoured brigade commanders. These drew on their reflections on recent experience, as well as on the new general 21st Army Group doctrine of integrated of all arms functional groupings, which itself drew upon the interaction of ideas of those closest to the actual fighting with those developed at high level, including, ultimately, Montgomery himself (see Plate 15).

Thus, during a visit by the MGRAC, G.W. Richards, Montgomery's Tank

Advisor, to Greenacre at 6th Guards Armoured Brigade Headquarters on the morning of 7 March 1945, Clarke (34th Armoured Brigade) was also present. Back at his own 34th Armoured Brigade Headquarters later that day, Clarke wrote to Greenacre referring to an agreement the two of them had made during or after Richards' visit 'to "belly ache" in unison on our joint woes', enclosing an account of 34th Armoured Brigade's participation in VERITABLE.[40] We can deduce that Greenacre and Clarke were of one mind – and that *that* was why Clarke was sending him the description of 34th Armoured Brigade's 'recent ramble in the woods', because: 'what befell there might interest you in certain places'. They were thinking along the same lines: 'we shall be in different Corps for the next operation [PLUNDER – the Rhine Crossing] but shall no doubt continue to have the same difficulties', that is ones common to Churchill-equipped armoured brigades.

Plate 15 Montgomery and his Commanders, after issuing his final orders for the Rhine Crossing, 22 March 1945. What is interesting about this photograph is, whether by accident or design, Lyne and Roberts are sitting (left and right) at the feet of the "Master" (the name by which Montgomery was privately and affectionately known by those who worked for him at TAC HQ) (photo IWM HU 102819: © Imperial War Museum, Lambeth, London).

'I think', Clarke wrote, 'we impressed the MGRAC [Richards] with the

need for an overall increase […] so that we may, for a change, own our own [specialised armoured and engineer equipment such as armoured] bridgelayers'. They agreed in that aim, and also on the desirability of increasing the firepower of the new armoured brigades: 'I will attack Jorrocks [Horrocks] next time I see him on the score of one separate field regiment [of SP artillery] to one tank brigade'. This was what would later become a recognised 'establishment' norm for the Independent Armoured Brigades.[41]

However, it was Greenacre's view afterwards that, 'it is seldom that an Independent Armd Bde will fight as a Bde for the reason that this conflicts with the principles of war as laid down by C-inC 21 Army Gp and F.S. Regs. Viz:- Large numbers of tanks in a Bde, are likely to nullify "Surprise", and are difficult to Concentrate. Cooperation with other arms is not made easier and therefore the Plan loses its most essential characteristic "Simplicity"' (*sic. abbreviations in the original*).[42]

This can be taken to mean that Greenacre espoused in this document the view that it would have been unusual that a Churchill-equipped Armoured Brigade would ever fight 'independently' as Brigade for the reason that this conflicts with the principles of war as laid down both by C-in-C 21 Army Group (i.e. by Montgomery's pamphlets) and by Field Service Regulations (i.e. principles that remained unchanged in Montgomery's list). Further, he claims that cooperation is hindered, and simplicity is not achieved.

Greenacre's argument, and call for close cooperation, makes sense at the small unit level (infantry and armour at platoon and troop or company and squadron level), and he is suggesting that Churchill tank squadrons should operate separately, and in direct support of infantry, in essence providing the necessary mix of armour and infantry on the ground – but also that 'a very close liaison between the tanks and *their protecting infantry* will prevent heavy losses in tanks".[43] However, by late 1945 Greenacre is reflecting common practice as there would have been very few, if any, on active service in North-West Europe who would have disagreed with this – at the small unit level.

6.4 Summation: Montgomery exercises authority and influence to get what he wants from all his commanders

The exposition of the combat narratives in this chapter shows that the methods employed by 21st Army Group came to demonstrate new best practice. The ability of the British Army to overcome the Germans continued to depend on its ability to mount successful all arms, i.e. combined arms operations. Command, doctrinal and organisational shortcomings had to be addressed. The co-creation, by Montgomery and key members of a small group of 21st Army Group commanders, of doctrine for the final assault on Germany was the main factor which both influenced and helped bring about the outcome whereby all corps commanders and divisional commanders utilised the same methods.

Further, the thinking of 'rising' subordinate commanders not directly involved in the drafting of Montgomery's pamphlets, derived from their experiences of actually fighting on the ground with infantry and armour, and was congruent with the thinking expressed therein. Still other commanders could follow and adapt, and became implementers. 'Rightness' can be seen in the later actions of Adair, Carver, Barker, Roberts, Clarke, Greenacre and Lyne, particularly in the role of Lyne as an implementer closely tied to Montgomery, through arrangements such as Lyne's 7th Armoured Division ad hoc 'Battle school'. Whistler could follow and adapt. Furthermore, however, another element to this process was also in operation: the way in which Montgomery sought to achieve a uniformity of practice through the effective dismissal or removal of 'blockers', i.e. those with a different kind of past experience. There is a complementarity between the elements of the process. They were simultaneous and interlocking.

Montgomery thus intervened in several ways. One was to institutionalise doctrine – intended to be the vital articulation between previous thinking, past experience and the present military problem to be solved – as the framework of action. Another was to remove from the pool or team those with past experience as practitioners who had been found wanting. By the end of 1944, apparent permissiveness remained only within the actual parameters of a more ordered 21st Army Group approach to tactics as well as to operational-level tasks that had developed as events unfolded. Further, once it had developed within 21st Army Group those who could not or would not work within it, among whom Bucknall was in the former category who

could not and O'Connor in the latter who would not, either were removed or effectively removed themselves from command and were replaced with those who could.

Thus, the apparent permission which remained was actually only permission to act within a commonly understood set of guidelines. These guidelines required the subordinate commander to act according to Montgomery's principle of war, The Initiative, and his principle of command, the initiative. This response can be called 'initiativewithin-the Initiative'. Thus, the view that Montgomery moved from prescription to an authoritarian approach in and after Normandy is also an over-simplification, and a distortion of the evidence. What he laid down was the necessity to be problemsolving. This allowed for a substantial measure of independent thought and freedom of action, and also for a 'crossover' to War Office doctrine, but only in so far as this was not incompatible with 21st Army Group doctrine at any one time from now on.

Finally it has to be made clear that Montgomery's belief that it was by the initiative of subordinates that the battle was finally won did not mean allowing for the subordinate commander altering the master plan. Rather, it meant his ascertaining the facts of the situation, then making plans to deal with the problem. It was a problem-solving approach within the given plan.

The apparent problem of whether it was a top-down dominated scene or a superficially subordinate but actually quite anarchic scene is thus an incorrect way to look at the problem as far as doctrine and operations are concerned. The suggestion in Carver's account of BLOCKBUSTER and others by those at this middle level of command that everything went 'like clockwork' indicates a clear connection for them between the ideas behind the conduct of this operation and its outcome. The simple conclusion which can be drawn is that the separation of Montgomery and the innovators and the drivers of innovation on the one hand and the implementers on the other had now reduced so much that asking if change came from the top down only or whether it was the product of a superficially subordinate but apparently 'anarchic' situation, so far as the process of innovation was concerned, is simply a redundant question by this time. A more productive way of understanding what was happening is to see it as a rather complex process

which accommodated both top-down imposition and apparent weak command and control. All were doing something new but they were interpreting it and doing it in their own way.

Montgomery's goal was the highest possible attainment on each of a set of important variables and the best balance of all three by the time of his offensive into the Rhineland in February and March 1945. The achievement of Montgomery's goal of a widening spiral of improvement across operational and tactical skills, in conducting the type of operations he now thought were necessary, in the given battle-space, at the tempo he desired led to the emergence of a new framework of action, through which previous experience could be successfully reinterpreted and brought to bear effectively. This was a different way to bring experience to bear. The orientation that previously sufficed was experience of 'what to do' but by late 1944 and into early 1945 the experience of 'quick thinking' within the goals of the master plan was the solution rather than any specific course of prescriptive action. In the same way, there was no permanent organisation of both armoured and infantry divisions in a *corps de chasse*.

Terrain and conditions – including the very bad weather, which deprived the attackers of really effective air support – together with ferocious opposition from the Germans and in particular the threat posed to British tanks by the Germans' extremely clever tactical use of self-propelled guns and hand-held, hollow charge weapons, all hampered rapid progress during the Winter 1944-45 battles. However, this framework reflected what had come to be recognised as the 'right' tactical methods. It owed much to Montgomery's efforts to further elucidate what he regarded as the really important operational lessons to be learned from the campaign, and to his attempts to enforce a mould of consensus.

1 LHCMA, O'Connor Papers, 5/4/52, Lieut.-Gen. Sir R.N. O'Connor to Maj.-Gen. J.F. Evetts, 16 October 1944. O'Connor's 'cap badge' was The Cameronians (Scottish Rifles).

2 [Major] Sir Carol Mather [Liason Officer, F.M. Montgomery's Tac. H.Q., 1944] to the author, 22 October 2005. In 1997, Sir Carol published a wartime memoir, *When the Grass Stops Growing* Barnsley: Leo Cooper).

3 LHCMA, O'Connor Papers, 5/3/32, Lieut.-Gen. Sir R.N. O'Connor to Maj.-Gen. A.H.S. Adair, 24 July 1944.

4 LHCMA, O'Connor Papers, 5/3/37, Lieut.-Gen. Sir R.N. O'Connor to Lieut-Gen. Sir Allan ('John') Harding, 19 August 1944,.

5 Montgomery, 'The battle of Alamein', in *The Sunday Times Book of Alamein and the Desert War*, ed. by D. Jewell, (London: Sphere, 1967), p.70. (Emphasis in original).

6 Montgomery, *Memoirs*, p. 81.

7 Indeed, it can be argued that Barker's most significant contribution to innovation was c.1938-39, as Commander, 2nd Battalion, King's Royal Rifle Corps, in Palestine and the UK. The battalion became the Motor Battalion of 1st Cavalry Brigade, which together with 2nd Cavalry Brigade formed what was renamed the 1st Armoured Division in 1939. The units which had originally innovated the 'motor battalion' doctrine were inappropriately committed by the BEF high command during the battle for France in 1940.

8 Brig. R.M.P. Carver, *The History of 4th Armoured Brigade* (privately published, Gluckstadt, [Germany], 1945/Aldershot: Gale & Polden, 1945).

9 Ibid., p. 35; Roberts, *Desert to Baltic*, p. 221. (The Comet was the last and most successful of Britain's wartime Cruiser tanks. The Comet had thicker armour than the Sherman and a high velocity 77mm gun). See also Plates 10 and 11.

10 Ibid., p. 36. (The Firefly was an American Sherman tank armed with a British 17-pdr gun instead of the standard 75mm. See Plate 11.

11 Ibid., p. 36. This could refer to the 'Schliessen line', or, more probably to the 'Schlieffen position' in said defence line around which the heaviest fighting took place.

12 Reid, *No Holding Back*, p. 187; S. Hart, *Road to Falaise* (Stroud: Sutton, 2004), p. 28.

13 Mr David Rennie, 'The Battle of the Reichswald', account of events by Adrien Van Nerkoven, Mayor of Tilburg, nr Nijmegen, Holland. [unpublished].

14 Montgomery, *A History of Warfare* (London: Collins, 1968), p. 22.

15 *Armoured Div. in Battle*, para. 2.

16 Canadian Military Headquarters Historical Section, Report No. 169, *(Operations Totalize and Tractable)*, 7 January 1949 http://www.dnd.ca/hr/dhh/Downloads/cmhq/cmhq.169.pdf [accessed 6 December 2005] (para. 18).

17 *Armoured Div. in Battle*, paras. 41 and 46.

18 Carver, *History 4th Armoured Brigade*, p.37.

19 WSRO, Whistler Papers, 9/48, personal diary, 6 October 1944. O'Connor felt the same in August 1944.

20 IWM, Lyne Papers, 71/2/4, Maj.-Gen. L.O. Lyne, unpublished autobiography, [n.d.], Ch. X, 'Command of the 7th Armoured Division – The last gallop', p. 1.

21 IWM, Lyne Papers, 71/2/4, unpublished autobiography, Ch. X, pp.1 and 4. Many of these troops, such as the 9th Battalion Durham Light Infantry, came from 50th Division, which Lyne commanded before it was decided to reduce it to a cadre strength, owing to the reinforcement difficulties.

22 Ibid., p.3.

23 IWM, Lyne Papers, 71/2/4, unpublished autobiography, Ch.VIII, 'Command of 59th (Staffordshire) Division – Normandy', p.11.

24 IWM, Burton Papers, 94/8/1, Maj. B.E.L. Burton [second-in- command, 1/5th Queens, 131st Brigade, 7th Armoured Division], 'Diary of a Regimental Officer', July 6-16, 1944.

25 IWM, Lyne Papers, 71/2/4, unpublished autobiography, Ch.X, p.3.

26 IWM, Wingfield Papers, PP/MCR/35, Brig. A.D.R. Wingfield, 22nd Armoured Brigade, notes on operations ALAN and COLIN (October 1944), quoted in his unpublished memoirs, 1980 [on microfilm], pp. 294-95.

27 IWM, Lyne Papers, 74/2/1, unpublished autobiography, Ch. X, p. 6.

28 IWM, Wingfield Papers, PP/MCR/35, unpublished memoirs, p. 305.
29 IWM, Lyne Papers, 71/2/4, unpublished autobiography, Ch. X, p. 5.
30 *Armoured Div. in Battle*, e.g. para. 6. The term ubiquitous refers to the role of armoured brigades. The sense here is different from some other contemporary usages by Allied commanders, e.g. Adm. Raymond Spruance USN. It is not meant to mean that armour could be everywhere – because it could go anywhere.
31 Ibid., para. 21.
32 IWM, Lyne Papers, 71/2/4, unpublished autobiography, Ch. X, p.11.
33 IWM, Greenacre Papers, 94/33/1, Guards Brigade Papers 1944-1946, 34th Armoured Brigade Conference, 4 March 1945, Minutes, para.4.
34 IWM, Greenacre Papers, 94/33/1, Brig. W.S. Clarke, Op. VERITABLE: 'Gist of Outline Plan as affecting 34 Armoured Brigade', para.3.
35 Anon. [Brig. W.S. Clarke], *The Story of 34 Armoured Bde* (Privately published, Germany, c.1948), p. 13.
36 IWM, Greenacre Papers, 94/33/1, Operation VERITABLE: 'Report on 34 Armoured Brigade Ops from D-Day to end of the Reichswald Forest Phase', p. 2.
37 [Clarke], *34 Armoured Bde*, p. 14.
38 IWM, Greenacre Papers, 94/33/1, Lt.-Col. P.N. Veale, 'ASPECTS Of CLOSE SP To Inf in FOREST FIGHTING', para.7.
39 *Conduct of War & Infantry Div. in Battle.*, para.51.
40 IWM, Greenacre Papers, 94/33/1, Operation VERITABLE: 'Report on 34 Armoured Brigade Ops' and covering letter, Brig. W.S. Clarke to Brig. W.D.C. Greenacre, 7 March 1945.
41 H.F.Joslen *Orders of Battle Volume 1 United Kingdom and Colonial Formations and Units in the Second World War 1939-1945.* (London: H.M.S.O., 1960), 2 vols. Vol. 1, p.10.
42 'Lessons from the Campaign in France, the Low Countries and Germany from an Independent Armd Bde point of view, June 44-may 45', by Brigadier W.D.C. Greenacre, p.1 'General [remarks], IWM, Greenacre Papers, 94/33/1.
43 Ibid., p. 6 'Movement of Tanks about the Battlefield by night"(Emphasis added).

7

The Reasons for, and Organisation of, Montgomery's Pamphlet Writing Process of late 1944

7.1 Montgomery develops his ideas – and those of 21st Army Group – into doctrinal pamphlets in November and December 1944

Following on from the apparent 'anarchy' or lack of control in the summer of 1944, divisional, corps and brigade commanders responded to Montgomery's command system and reflected in their methods the way that had become accepted and that way he now wanted them to fight. The 'set-piece', or large-scale deliberate assault battle employing the full concentration of offensive resources, was what we may now call 'Montgomery's strategy' or selected military method, that is, his adopted style of war-fighting. This was a recognizable strategy: as Montgomery and 21st Army Group fought their way into Germany, the maximum use was made of all available firepower. As the lessons of Normandy began to be disseminated amongst his commanders, Montgomery's pamphlets of late 1944, especially *Some Notes on the Conduct of War and The Infantry Division in Battle* and *The Armoured Division in Battle*, became part of the ongoing process. They were a documentation of what some corps and division commanders were already successfully practicing. Nevertheless, what happened in 21st Army Group in late 1944 and 1945 was that all subordinates, now steeped in ideas which Montgomery believed had come to be accepted as the right ones, adopted 'his' methods. At the operational level, Montgomery's emphasis on the set-piece battle as his chosen style of war-fighting placed the relative superiority of the British Army in matériel against the relative comparative weaknesses

of the Germans.

The weight of firepower and emphasis on other material factors which the British were able to employ in a highly organised, intricate and balanced way by that late stage of the campaign were not capable of being equalled by the Germans. However, the Germans had shown themselves to be adept at accommodating their material inferiority and achieving effects out of all proportion to their actual weapon power. In addition, the delayed launch of the converging American operation, GRENADE meant that fighting during VERITABLE (8 February-10 March 1945) took on an attritional quality. The problem was to regain the Initiative by resuming more mobile operations. This, in turn, required subordinate commanders to exercise their initiative to be proactive.

Institutional practices were still highly resistant to a commonality of practice, and to a uniformity of practice in combining or integrating armour and infantry. Combining and recombining, in a flexible and rapid manner was to prove to be required in a situation where it was necessary to use armour and infantry together to overcome the dense anti-tank defences which the Germans had put in place in North-West Europe. To make the 'model' fully explicatory, the previous chapter has filled out the substance of Montgomery's active contribution: how he intervened to institutionalise a meld of those ideas that had come to be widely agreed upon by him and key commanders. It is now necessary to turn to how that meld of ideas – not War Office doctrine – was expressed, and fed back or translated into the expression of doctrine within 21st Army Group. The operation of a military culture which permitted apparent anarchy became translated into a new framework for action, which at the most basic level gave rise to standard operating procedures or routines. The core value became the Initiative/initiative-within-the Initiative because, as Montgomery recognised, there was no such thing as a 'normal' battle. He did not want to tell commanders how to fight; he wanted to tell them how to think, so that they could decide how to fight.

A process existed for feeding 'lessons learned' into a corpus of many different types of doctrinal publications. This reflected the perceived need for the importance of doctrine. But much "official" doctrine was found lacking,

or units were doing their own thing. In the Second World War, for example, Montgomery was not alone in comprehending the importance of the Initiative in planning and conducting operations.[1] In his pamphlets, at the end of 1944, Montgomery attempted to systematise his methods into a logical framework. We can thus speak of, and identify, his own 'principles of war' which differed in substance from other frameworks of principles which went before. However, this format drew its broad inspiration from the general way the army attempted to adjust official doctrine to lessons learned from operations. This was an approach with roots in the previous thinking and experience of the British military, as first expressed in *FSR* of 1920 where initiative was considered not to be a principle of war in its own right. However, by late 1944, gaining the Initiative had become one of Montgomery's principles of war.

Carver, reflecting Montgomery's views, further developed his views post-Normandy, as demonstrated in his command of 4th Armoured Brigade. It was essential to prevent the Germans regaining balance and securing a ruptured front before mobile warfare overwhelmed their remaining forces in the final phase of the campaign. Carver was thinking strategically:

> The great art is first to be able to judge correctly which are the most important factors at any one time: secondly to choose the right moment for decision, decide then stick to it. […] When the decision is to be made, it must be made immediately, which it can only be if you have kept yourself well informed and have been looking ahead all the time. […I]f a commander has not the mental courage to make decisions without delay and to stick to them, if he hovers or constantly changes his mind, the result will be a loss of the initiative and confusion.[2]

Montgomery's belief that adaptability depends almost entirely on people and their training was to be made a precept or key part of what the doctrine actually said. The armour to hand was a factor influencing the development of the new tactical doctrine which was being created. Thus, the shape of final doctrine was influenced by adaptations at lower level to employ the different types of tank available to best effect. According to Montgomery's 'capital tank' idea, making the Sherman tank – and all other models of tanks – a multi-role tank would best match tactics and a tank that was available to operational aims and intentions. What the Churchill-equipped armoured brigades did was thus indicative of what was acceptable new practice rather

than being illustrative of Montgomery's preferred organisation and best practice for *all* armoured units. The different type of tanks available was an important factor affecting both the shape and application of the final doctrine.

7.2 New circumstances and new ideas

There was a powerful sense of the need for speed, strategically, operationally, tactically, and individually if the war was to be won without undue losses and within a reasonable period of time; in order to achieve this it was necessary to maintain a pattern of action that was offensive. Montgomery exercised personal command. He communicated either directly or through senior intermediaries with all his senior commanders. Thereafter, within the general limits of the framework of his instructions or plan, these subordinates could do as they liked to realise his intentions. Frequently, however, the lack of accompanying detailed, specific written orders from Montgomery had in the past allowed confusion to creep in to the minds of subordinates as to his actual aims and intentions, and created the exact opposite of gaining and holding 'the Initiative' that Montgomery wanted.

This meant that change was required both on the ground and within the minds of commanders within Montgomery's Army Group. Innovation with respect to integrating and combining armour and infantry was initiated primarily in the armoured arm as this was where the need for change was perceived by Montgomery as being greatest. The processes by and through which doctrine was created in 21st Army Group in action involved the brigade and divisional levels because, as the levels of management closest to the actual fighting, they were in the first instance the level of learning how to do it with the equipment to hand, and the available manpower. Within the command chain the drive for operational and tactical innovation was push-pull, and went in both directions. Commanders at lower level had challenged, sometimes criticised and were also changing previous doctrine in response to the problems of fighting in Normandy.

While the need for speed permeated the entire command structure, commanders at different levels could be working from different planning systems towards different planning objectives because of different past

experiences which were in play. Some were simply bound by or to the lessons from previous victories.[3] Further, this dynamic sometimes led to a lack of new thinking by more junior officers.[4] However, operational and tactical challenges provided the seedbed for the growth of new ideas. The reasons for the genesis of ideas were both operational and tactical. Operationally, manoeuvreoriented methods instigated on the basis of previous experience in the armoured arm had failed: thus a 'business-as-usual' approach was clearly not going to be sufficient. Tactically, the Germans could be well dug-in, they were well-protected in wellcamouflaged positions, and their tanks still enjoyed some advantage of long-range fire. They were not going to be easy to dislodge and their dense anti-tank defences were not going to be overcome by the use of armour alone. The replacement of lessons from past experience by current experience of what would work was conducted at many different levels of the corps-division-brigade hierarchy. What Montgomery wanted from his commanders, at the start of the process of new doctrine being developed under his direction, was the introduction of better combined arms practice and for all officers proactively to exercise initiative in order to secure the Initiative. The experience of those who had never served in the desert, and not been influenced at first hand by desert practice, was both necessary and important as the value of both 'desert training' and War Office related doctrine were increasingly discarded in favour of new solutions to new problems of combat, learned at first hand, or from those who were in contact with the enemy. These new solutions were tried out and found sufficient and acceptable practice. Armour-infantry doctrine for the final assault on Germany would soon be based around principles enunciated in Montgomery's pamphlets on the infantry and the armoured divisions of November and December 1944. A complex set of actors in interaction produced this doctrine. It was also shaped by how Montgomery commanded to produce a uniformity of method. The process resulted in one of three bodies or groups (firstly, those attempting to fight with desert-influenced methods, including successful commanders from North Africa who did not change, or new commanders who looked to North Africa experience alone) being sidelined, and two others (the second group: successful commanders from North Africa, and, finally, our third group of

new or replacement commanders open to new ideas) being brought together in a collective understanding. The commanders open to change and the new and replacement commanders with ideas and open to change both contributed to the formulation of new doctrine, and also fed into the single emergent grouping which comprised successful higher and senior-to-middle level commanders. They implemented a way which crystallised as a recognizable, unified approach within 21st Army Group – the new way that emerged in Normandy, formed from a realisation that desert practice applied to very special circumstances; it did not apply to Normandy. The new amalgam emerged from these three groups, which, towards the end of 1944, were influencing the development of doctrine and practice in different ways. By utilising the best available knowledge and experience at his disposal, not just his own knowledge or ideas, Montgomery ensured that the creative responses to the problems of the fighting in north-west France and latterly in North-West Europe were taken on board and a structure provided for these to be institutionalised. Montgomery's ideas validated and absorbed the experiences of commanders at the sharp end whose opinions he valued. He put them together with his own ideas through a process which allowed the output to be synergistic. Thus, as armour and infantry were working together in new ways which neither arm could have delivered entirely on their own, this process was one which could not have been delivered by any one commander on their own – this includes Montgomery.

As we have seen throughout this book so far, the large British armoured force fielded by 21st Army Group in June 1944 had been a force divided by doctrine. War Office policy was – and remained – officially to accept the doctrines of two contending schools of thought as to the 'true' purpose of armoured formations; that tanks might be used in close cooperation with infantry, or that they might operate independently. However, in practice the functions of tanks were seen as alternatives: either infantryarmour cooperation or exploitation, each requiring a different type of tank: the type of tank, cruiser tanks or infantry tanks, with which a formation was principally equipped made its intended battlefield role clear. Against War Office output, Montgomery's policy was to create a single, imposed doctrine on his Army Group commanders based on their own current best practice.

7.3 The perceived need for and importance of doctrine

Within a military culture which emphasised the learning of the correct lessons – which higher leaders (brigade commanders and above) were regarded as being able to learn for themselves, then teach subordinates – doctrinal publications appeared in a number of different series, each with its own function within the overall purpose of doctrinal dissemination. Doctrinal publications – of which there were many – inevitably presented ideal sets of general circumstances, and also principles or methods by which it was understood that certain results or objects might be achieved. Although it was emphasised that, in order to follow through the lines of doctrine, principles should be adapted to situations according to the circumstances, in practice junior officers were taught to reason according to a series of prescribed steps to form an appreciation of the situation. There was often a lack of adequate guidance for junior commanders on how to apply principles of war at their level, according to the circumstances of the moment. This meant that they leaned on heavily formulaic principles of war. Traditionally, junior commanders had little freedom of action. This can be contrasted with senior officers' planning procedures. Senior officers, often brigade commanders and above, had been traditionally allowed great latitude to permit maximum possible freedom of action so that nothing was allowed to interfere with the intention to complete the particular task in hand which was part of an overall and wider plan. As the early stages of the Battle of Normandy had demonstrated, this freedom had frequently resulted in failure by corps commanders to gain and hold 'the Initiative'; loss of initiative; and on occasion confusion by even divisional commanders, let alone their brigade commanders. This doctrine, or lack of a successful one, did not empower subordinates to act in the way Montgomery now wanted after Arnhem. It was not that Montgomery wanted to change the way that officers learned lessons: but he did want them to learn new lessons; and he wanted a commonality of – a successful – approach uniformly ('ubiquitously') right across the officers under his command.

Back in 1940 and 1941, as a commander in the UK, Montgomery's predilection for teaching people 'lessons' led him to organise 'study weeks'.

Between 7 and 12 October 1940, for example, all unit commanders down to battalion COs were required to contribute to, or at least participate in Montgomery's V Corps Study Week:

> The study week was a huge success. I think everyone enjoyed it; it went with a "bang" from start to finish and we all learned a great deal. The night operation scheme was voted great value and I am grateful to you for the preliminary work you put into it.[5]

His determination that the lessons of his campaigns should be properly understood and disseminated has been duly noted:

> Ensuring that the right lessons were spread as widely as possible was clearly a task to which Montgomery was deeply committed. He carried out this duty through his pamphlets and memoranda; by means of letters and the circulation of his diary notes, containing his thoughts on the lessons of his battles, written as soon as they were won; and through his lectures and personal contacts.[6]

However, the army's doctrine had to adjust to a variety of different experiences, the importance of which was not easy to work out. In expounding his 'lessons', Montgomery did not shy away from putting himself at loggerheads with official policy and established doctrine. For example, General Lyne had witnessed a visit by Montgomery to the Senior Officers' School, Minley Manor, Camberley on 25 October 1940 when:

> a student brandished one of the military training pamphlets, which the War Office produced as a guide on tactical problems, and pointed out that what General Montgomery said was the exact opposite of what was laid down in the pamphlet. General Montgomery looked at him in pained astonishment, […] he strongly advised him to take notice of what he had said, which he knew to be right, rather than what an anonymous author at the War Office thought was right.[7]

Montgomery's centrality resulted in his interpretation of what would work and what would not work being given unofficial prominence within 21st Army Group over other earlier views. Although Montgomery imposed the importance of cooperation between the two arms – armoured and infantry – his actual template for how this would evolve or be implemented did not survive the initial fighting in Normandy and itself changed because, as circumstances would show, what was required in North-West Europe was prototype battlegroups, and not the tank regiment and the infantry battalion as separate entities.

Thus, what transpired in Normandy was the start of a process of learning

and implementing new lessons while the campaign was unfolding. Not only was the speed of operations increasing but the speed of learning also had to increase. We have seen Montgomery facing the Normandy problem, and how he tried to resolve that. Normandy represented a new experience: it also represented a new operating environment. Beyond the close, confined countryside of the bocage the terrain was – for the most part – apparently wide, yet there were no fast-flowing tank versus tank battles even in the wide open fields where such actions might have been possible. This was not just terrain-related – as some of the old school armoured commanders felt – but also a function of the fact that the German defenders used every opportunity to strengthen, and hide, their defensive positions so as to make the situation less tenable for the attaching forces. Firepower on its own could not prevail. Operations called for large-scale infantry attacks with armour supporting. It was necessary to learn again from new experience what would work in this new situation and under the demands of being in action. Once out of Normandy, 21st Army Group had a completely new and different problem. This had to be solved. In addition to this situation, Montgomery also had to deal with the different experiences of his subordinate commanders.

In late 1944, three instructional, training pamphlets were produced and circulated within 21st Army Group. Two, *Some Notes on the Conduct of War and The Infantry Division in Battle* (November 1944) and *The Armoured Division in Battle* (December 1944), were sent to the commanders of corps and divisions, often with a short personal dedication.[8] The third, *Some Notes on the Use of Air Power in support of Land Operations and Direct Air Support*, dealt with the roles of air power in the tactical, land battle. A fourth pamphlet, *High Command in War* appeared in June 1945. There was, Montgomery felt, a definite requirement for his pamphlets. They were needed and should be produced at once ‘whilst the lessons of the campaign were fresh in all our minds’.[9]

7.4 Factors affecting the doctrine’s shape, and its application

The British official view was that the medium tank function consisted of two alternatives, infantry-support and exploitation, each requiring a different sort

of tank. There were also light tanks for reconnaissance and similar missions.

Some British tanks (e.g. Cromwell, Challenger and Comet) were viewed as being ‘cruisers’ intended to engage and defeat enemy tanks in specifically armoured operations, in fluid and mobile warfare. British improvements to the American Sherman tank proved ultimately to be one of the best solutions to the problem of getting a powerful gun into the field where it could tackle the best German tanks.

The other British tanks (e.g. Churchill) were Infantry (‘I’) tanks, intended only to operate in support of infantry in both the assault and defence, and deal with enemy support weapons, including enemy tanks. Churchills were given extra armour to compensate for their slow movement. The I tanks – resembled in these respects the British ‘heavy’ tanks of the 1914-18 period.

As will now be obvious, these two different types of tank did not fit with Montgomery’s doctrine of use for them. This had organisational implications. Close cooperation with infantry had hitherto been primarily the responsibility of the I tanks of 21st Army Group’s tank brigades under GHQ command, as opposed to the cruisers of the armoured brigades. Thus, tank brigades and armoured brigades, reflecting their different intended functions, were equipped differently. Montgomery had long decided that this was unsatisfactory. In Montgomery’s doctrine all references to (Army) Tank Brigades now disappeared.

Different views existed lower down the chain of command. Carver’s view, in a document which can be dated to the last three months of 1944, was that:

> if the number of tank formations available for an army is limited by man-power and production, there must be as many capable of carrying out the pursuit as the communications of the country and the transport available can maintain. If you can afford to have more tanks than that, as we have had, then they should be tanks primarily designed for the support of inf[antry]. Unless however you have sufficient of the latter, you may never be able to create the conditions as a result of which pursuit occurs. If the tank b[riga]des, 6 Gds, 33 and 34 and previously 31, had been equipped with really good ‘I’ tanks, the conditions in which the “cruiser” tanks could have been employed would have occurred earlier and more often. I maintain therefore that an army or group of armies, can afford in a European theatre of war to have both an ‘I’ tank and a cruiser tank, and that it will profit by having them.[10]

Despite Carver’s view, Montgomery wanted a multi-role tank. What was required, Montgomery believed – this was brought out more fully in *The Armoured Division in Battle* – was armoured formations, equipped with a

multi-role tank, equally capable of undertaking the roles of close support of infantry, exploitation and pursuit, and trained accordingly. Further, by late 1944, Montgomery had concluded that the Churchill's slowness rendered it unsuitable as a capital tank. A true multi-role tank was not yet however available.[11] Therefore, he did the next best thing, in the light of his view that it is easier to change tactics than it is to change technology, which was to insist on the 'ubiquitous' use of armour irrespective of the type of tank with which a formation was equipped. The writing was, therefore, intended to be clearly on the wall for 21st Army Group's tank brigades with the publication of the earlier pamphlet. The 34th Tank Brigade – to cite just one example – re-equipped and reorganised, was re-designated 34th Armoured Brigade in February 1945.

7.5 The orchestration of response

Montgomery was a very 'modern' commander in the speed at which he was willing to revisit conventional wisdom to react to current circumstances. Afterwards, he wrote:

> once a fighting machine has been trained thoroughly in the basic principles of warfare, it will have no great difficulty in operating successfully. *It is of course essential that commanders at all levels should be versatile and mentally robust and that they should not adhere rigidly to preconceived tactical methods.*[12]

Montgomery realised this view in North-West Europe in his pamphlets of 1944. However, although each of them appeared over Montgomery's name and with his authority, all the evidence suggests that some of their preparation was entrusted to others; in the case of *The Infantry Division in Battle* to Major-General Lyne; and, apparently, in the case of *The Armoured Division in Battle* initially to Lieutenant-Colonel, A/Brigadier P.R.C. Hobart.[13] Lyne had great experience in infantry command. Having commanded 169th Infantry Brigade in England, Iraq, North Africa and Italy, 1942-44, he commanded 59th, then 50th Infantry Division in North-West Europe until it was also disbanded to provide replacements for other divisions. Similarly, Hobart was a greatly experienced – albeit junior – armoured commander. Hobart was certainly available for the work in late

1944: ‘for ten relatively peaceful weeks, until the middle of January, the [7th Armoured] division was almost entirely motionless, initially guarding the west bank of the River Maas and later the east bank’.[14] This may have been the principal reason why Montgomery at first chose such a junior officer.[15] However, the *Armoured Division in Battle* pamphlet went through several iterations and Roberts was certainly involved in its preparation: ‘I spent a night with Monty recently; I had to go to discuss this pamphlet on Arm[oure]d Div[ision] tactics I have been told to write. The first edition was almost entirely torn up!; I have now re-written most of it & am heartily sick of the sight of it!’[16]

Montgomery had his own ideas, but his main idea was to be so quickly responsive to circumstances as to influence a change of circumstance. These pamphlets are evidence for how, in the light of his experience of the combat performance of his armoured and infantry divisions since D-Day, Montgomery thought the problems of fighting with these tools should be tackled during the remainder of the war against Germany. The pamphlets have often been neglected, or treated somewhat cursorily. They were never intended to formulate or state precisely a complete theory of strategy: however, Montgomery’s principles for major-level warfare as he formulated them in *Some Notes on the Conduct of War and The Infantry Division in Battle* and *The Armoured Division in Battle* added up to a coherent operational method. His ideas – in the pamphlets – reflected experience. His ‘principles of war’ and other war-fighting principles in turn gave rise to standard tactical methods which combined the action of all arms.

It is not possible to understand how 21st Army Group conducted the campaign through focusing solely on Montgomery: modern research has stressed that a large degree of similarity existed between the operational methods of the three highest command levels.[17] However, within that mould of consensus there was also disagreement. Whether or not Montgomery’s experience was congruent with the experiences of subordinates responsible for tactical leadership actually fighting on the ground with these tools, or with official War Office doctrine, can be decided with reference to the pamphlets, among other types of evidence. The ideas which came to be widely accepted as the right ones in 21st Army Group Montgomery institutionalised, and then

enforced, as doctrine.

Now we have seen that, as well as containing methods and ideas gleaned from commanders working at the ‘sharp end’, Montgomery worked with others to produce the actual text of these pamphlets, notably, Major-General Lyne, as well as Hobart and Roberts. This suggests strongly that they were most certainly a synergistic not an individualistic product. Lyne found the process easy and congenial: ‘he [Montgomery] would always find time to see me whenever I asked for an interview. His clear and logical thinking and quick grasp of essentials and discard of all unnecessary detail made my task [at 21st AG Tac HQ, Eindhoven, September-October 1944] near much easier than it could otherwise have been’. However, Lyne’s role was not just one of writing: he also “researched” amongst fellow senior commanders on Montgomery’s behest. Lyne visited nearly all the corps and divisional commanders in the Army Group and ran ideas past them. This also shows that the evolution of doctrine within 21st Army Group was more synergistic with the experience of fighting and with commanders’ experiences of actually fighting on the ground than has sometimes been supposed. Although he sometimes got ‘rough handling if their minds were too preoccupied with present operations’, Lyne got much useful advice and help from those he consulted. He recognised the value of trying out the ideas as he was working them out, as ‘these roles in battle and the basic points in each role were naturally the subject of considerable difference of opinion amongst Corps and Divisional Commanders’.[18] He visited O’Connor at VIII Corps Headquarters at Mierloo on 8 October, for example, as O’Connor was preparing to launch CONSTELLATION, and O’Connor lent him papers he had written on tactical problems met in Normandy.[19]

Lyne thus consulted widely among the corps and divisional commanders, but it remains that the conceptual imprint at the overarching level was predominantly that of Montgomery. The armoured brigade commander when Lyne commanded 7th Armoured Division later, thought him a ‘“Monty Yes-man”’.[20] It may have been the case, therefore, that in selecting Lyne Montgomery chose someone he knew would reflect his views. It would only be surprising if it were otherwise.

7.6 Summing up Montgomery's pamphlet writing in North-West Europe: the process

Montgomery's approach to the conduct of war, it can thus be seen, was rooted in the experience of the British Army expressed in *FSR*. However, the substance of his principles of war, as shall be seen, did not directly come out of *FSR*. He effectively drew up his own list, a new list of principles which he thought were the right ones. British doctrine identified principles as a broad set of tools. It is possible to distinguish between Montgomery's principles of war and the other centrally important points – best described as Montgomery's war-fighting principles – which added up to a coherent operational method. The roots of some of his ideas can be tracked down to specific core principles in prevailing, general British doctrine. Firepower became embedded into it as a result of the experiences of World War One. The carefully staged conduct of battle, based on superior firepower and with all arms cooperating, was the major characteristic of this way of fighting. However, it was Montgomery's recognition of the importance of, and the need for an institutionalisation of, a problem-solving approach which emphasised the importance of context which led to success in North-West Europe.

A concept of operations which emphasised a 'master plan' in which as little as possible was left to chance and to which subordinate commanders were required to adhere unwaveringly left correspondingly little scope for independent initiative as far as planning of operations was concerned. Further, an unhelpful carry-over from Normandy – and before – was the cumbersomeness of command arrangements whereby each arm retained separate headquarters. This negatively affected the efficiency of the Army Group's utilisation of armoured units. Furthermore, the armoured commander was subject to the infantry commander in an independent tactical command, with only one exception of which this author is aware – the case of Clarkeforce in October 1944.[21] However, in the final stages of the campaign the armoured regiment commander was often placed in command of the group. Nevertheless, deployment – using established routines for combining infantry and armour, took considerable time – with consequent loss of the

advantage of surprise and perhaps also of the fleeting opportunity to achieve a breakthrough.

If this almost guaranteed that it was difficult for the armoured commander to act ‘independently’, this was not what Montgomery was essentially after. Although he recognised that a large force of armour which had broken into the enemy’s rear could have ‘great moral effect’, he did not believe that armour should operate independently. This was interrelated for him with making his plan, which ensured not only crude material and numerical superiority but also – based on intelligence information that had been processed and analysed, as well as his own insight, imagination and initiative – the best weight of firepower and numbers applied at the decisive point, at the right moment for decision.

For all the above reasons, there *was* little scope in Montgomery’s system for decisions which resulted in the master plan being altered. There would be no *new* plan. He needed a process to inculcate this idea in the minds of his most senior subordinates, also that there was always scope for individual initiative on the part of subordinates, and the three pamphlets of late 1944 were the process by which he sought to do this. This involved a problem-solving approach within the envelope of the overall plan. Changing tactical problems emphasised the necessity for subordinates to be problemsolving in terms of the general intentions expressed in the given plan and if necessary to go beyond the official textbook.

An obvious break with existing norms and practices of command-and-control can be seen. The previous situation (in Normandy) had been one in which decisions on the actual methods of fighting were largely left to unit commanding officers. This state of affairs was replaced post-Normandy by one where military pamphlet literature emerged in the field as a means to convey specific tactical and organisational ideas which reflected collective experience, from which no deviation was permitted – because not required. Of course to say – as described in the previous paragraph – that the situation was one where Montgomery inculcated ‘his’ ideas is far too simplistic an explanation, as we have seen in this chapter. He actively took onboard the ideas of others, and promulgated this as best practice. Further, the writing of the pamphlets themselves was a more collaborative process than might be

supposed, including – at least – Lyne, Hobart, and Roberts. Reciprocal command relationships were reflected in the writing of the Pamphlets.

Thus it can be established that Montgomery's evaluation of the performance of his armoured divisions was that their performance on the ground in Normandy in the hands of some of his commanders had not been all that he had hoped for. This was particularly true with respect to divisions which had fulfilled his expectations in North Africa: 7th Armoured Division being a classic case. The resultant process of the translation of best-practice experience into method involved a problem-solving approach within agreed-upon frameworks of common understandings which, once established, then became non-negotiable. Montgomery initially moved from dogma towards being a 'reflexive' commander by taking on board others' experience (the process we have seen in this chapter), but also responding to the unfolding situation and encouraging other commanders to do the same – albeit in what can be considered in retrospect to be a somewhat inflexible manner: by the imposition of the doctrine in his Pamphlets as we shall see in the next chapter. Nevertheless, in an important sense, it can be said that the Pamphlets also reflect reciprocal command in action.

To conduct new-type operations successfully needed different structures; and if necessary new commanders. A new set of relationships, a new pattern of command, and a new development of practice emerged to meet the challenge. Montgomery intervened and commanded. There was an official 21st Army Group process in which Montgomery pulled everything together. In the example from Normandy of Roberts and O'Connor, O'Connor was apparently leaving the initiative to subordinates to suggest what they wanted to do in a continuation of the ad hoc responses. In the case of Roberts and Montgomery and the production of Montgomery's pamphlets, Montgomery was not only the Field Marshal holding the whole thing together and ensuring that things were moving forward in the right direction in terms of his operational aims and intentions, he also took an active role in shaping the methodology of how things should move forward at the level of the actual fighting. This is evident, not only in actions but in the production of these pamphlets.

There was also now, for the first time need for a uniform doctrine that

answered the ‘big’ problem of method: the introduction of fluidity into the action of major formations. As importantly, however, rather than telling people how to do things, Montgomery insisted on the importance of people coming up with their own answers with regard to problem solving, and on the interlinkages between problem solving and getting to the overall aim, which was the relentless imposition on the Germans of the condition, ‘mobile war’. Within this chapter we have seen the process unfold by which Montgomery did not tell commanders how to fight but rather told them how to think, so that they could decide how to fight using their own initiative. Armoured formations proved flexible enough to adapt thereafter. This in its turn influenced and interacted with how Montgomery made his choices of subordinate commanders.

In short, the problems of fighting in Normandy, and the bubble-up responses from commanders, gave rise to three sets of responses from Montgomery: firstly there was a pattern of command changes in certain corps and divisions; then there was a step-change within the existing culture and the norms and practices of the Army; and finally there was also the production of Montgomery’s pamphlets as the means to convey and disseminate specific tactical and organisational ideas because at the start of the campaign some commanders had produced these new lessons in a more or less isolated manner.

1 Slim did so too: ‘in war it is all-important to gain and retain the initiative, to make the enemy conform to your action, to dance to your tune’, Field-Marshal the Viscount Slim, *Defeat into Victory*, unabridged ed., (London: Cassell, 1956), p. 292.
2 IWM, Carver Papers, Lectures and Articles on Armoured Warfare 1940s, Brig. R.M.P. Carver, ‘Command Of An Independent Armoured Brigade – Some of the More Important Points’, p.5.
3 Bucknall, Erskine, and Hinde, for example.
4 For example, the actions of 52nd Division at Drierwalde and Hopsten, as shall be seen in the next chapter.
5 Barker MSS, Montgomery to Brig. E.H. Barker, 15 October 1940.
6 S. Brooks, (ed.), *Montgomery and the Eighth Army*, p.6.
7 IWM, Lyne Papers, 71/2/7, unpublished autobiography, Ch.IV, pp.7-8.
8 Montgomery also sent copies to top figures, including Churchill, UKNA, PREM 3/316. He also sent a personally inscribed copy to U.S. Chief of Staff, Gen. George C. Marshall, 17th Nov. 1944 (see Forrester 2014: pps 1314 and 1315).
9 IWM, Lyne Papers, 71/2/4, unpublished autobiography, Ch.IV, p.1.

IWM, Carver Papers, Lectures and Articles on Armoured Warfare 1940s, Brig. R.M.P.Carver,
10 'Comments on Lt-Col. JOLLY's letter', p. 2, Col. Jolly was at that time Commander, 144th RAC, 33rd Armoured Brigade. In April 1945, Jolly became Chief of Staff, 79th Armoured Division.
11 Even the Comet tank, the last and by far the best of the line of Britain's 'cruiser' tanks and the last British tank design of the war to see action, probably could not fully embody all Montgomery's requirements for a capital tank any more than the Cromwell had, or the 17-pdr-equipped Challenger stop-gap design which replaced it; predictably, similar adaptations were made for Comet.
12 Montgomery, *El Alamein to the River Sangro*, p.103. (Emphasis added.)
13 [Maj.] Sir Carol Mather to the author, 22 October 2005. See also Plate 10.
14 P. Delaforce, *Churchill's Desert Rats: From Normandy to Berlin with the 7th Armoured Division* (Stroud: Sutton, 1994), p.124.
15 Montgomery's choice of Hobart was not on account of Hobart's acquaintance and correspondence with Liddell Hart, Correspondence between BHLH and various members of the Hobart family, including both Major General Sir P.C.S. Hobart and Lieut.-Col. P.R.C. Hobart, LHCMA, Liddell Hart Papers, LH1/376. It is not easy to think – or see – why that should have influenced Montgomery.
16 LHCMA, Roberts Papers, Letters Home 1940-1944, Maj.-Gen. G.P.B. Roberts to his father and mother, 12 November 1944.
17 See, for example S. Hart, 'Field Marshal Montgomery, 21st Army Group, and North West Europe, 1944-45' (doctoral thesis, University of London, 1995), pp. 262-3.
18 IWM, Lyne Papers, 71/2/4, unpublished autobiography, Ch. IX, 'Writing a Book – Command of 50th (N) Division, N.W. Europe', pp. 1-4.
19 LHCMA, O'Connor Papers, 5/3/60, Maj.-Gen. L.O. Lyne to Lieut.-Gen. Sir R.N. O'Connor, 9 October 1944.
20 IWM, Wingfield Papers, PP/MCR/35, unpublished memoirs, p. 299.
21 In support of this argument that the case of Clarkeforce was the opposite of what the text – which relays the official position as to what would be usual – says, Carver noted that '34 Tank Brigade under 49 Div[ision …] achieved a great deal […] with tanks as the primary arm, supported by infantry'. IWM, Carver Papers, Lectures and Articles on Armoured Warfare 1940s, 'Comments on Lt.Col. JOLLY's letter'.

8

The Pamphlets' Doctrine and its Practical Expression

8.1 Learning from the current battle experiences of others, quickly

It can be seen that responses were becoming more rapid in terms of the speed with which plans were being both made and carried out and hence more effective. This was not, in fact, a rising tide which 'raised all boats' in terms of a fast decisionaction cycle by all commanders across the board. A problem remained from the time of the early fighting in Normandy when, still trying individually to learn from and to apply War Office doctrine 'nobody would learn from the experiences of others' and instead in practice applied principles at a remove from current practical lessons. In the later stages of the campaign, in the case of a division such as 52nd (Lowland) Infantry Division which had not seen action in the Normandy fighting or indeed in the pursuit phase thereafter, there were also problems learning quickly enough from current experience. This had created a gulf between the ideas that those responsible for tactical leadership were looking for and what was said in official written doctrine. It still did not solve the problem of everybody 'singing from the same hymn sheet' of a strong common doctrine of all arms. The fall out of this was that Montgomery, aware that superiority in matériel on its own was not enough to guarantee success, also sought to impose his ideas for conceptual superiority in the area of doctrine, actual systems and their proper utilisation on the battlefield.

Montgomery sought to edge 21st Army Group away from repetitive tactical repertoires, not only with the intention of imposing mobile war on the enemy per se but also of creating the relationship between conceptual and

material superiority which would bring material superiority to bear to greatest effect in changing circumstances. There would thus be a vital interplay between securing the Initiative in operations and the institutionalisation of tactical conceptions which, against the baseline of the standard tactical methods which best comprised the action of all arms, emphasised decentralised on-the-spot decision-making, and required commanders to exercise their initiative to be proactive. This was intended to reduce the need for orders. Always, however, whatever was done had to be within the aims and objectives of what Montgomery called ‘a master plan’: this was a design for operations, utilizing the dimension of the air as well. In this way, Montgomery hoped to bring tactics into line, or as much into line as was necessary, to realise his operational conception of mobile war as a further development from the set piece battle, once the conditions for break out had been created: where the opposition was organised, but not continuous, either in a firm front, or in depth. Finally, there would be a pursuit, presenting even greater opportunities for speed of thought and action. New ‘best practice’ within the ground-rules Montgomery had laid down in the pamphlets is seen to be embodied in the methods employed by Carver’s 4th Armoured Brigade, Greenacre’s 6th Guards Armoured Brigade, Lyne’s 7th Armoured Division, and Barker’s VIII Corps after the Rhine Crossing.

The advance into Germany and the breaching of the Rhine barrier itself preparatory to the advance from the Rhine was important for the command, operational and tactical development that took place. Under Montgomery’s general direction, this yielded a specific doctrine as a framework for action and – more importantly – a specified manner or general style of reciprocal command as the framework of action. The reason this took as long as it did, in addition to circumstances in the progress of the campaign, lay in the historical experience of the Army as an institution. Nevertheless, the western defences of Germany were successfully breached in late 1944-early 1945 and the Rhine reached in early 1945.

8.2 Montgomery’s two pamphlets of November and December: what the doctrine actually said

The pamphlet *Some Notes on the Conduct of War and The Infantry Division in Battle* was the first of Montgomery's pamphlets on how to conduct modern war by which the lessons of Normandy began to be circulated in 21st Army Group. A war, it asserted at the outset, was won by victories in battle. No victories would be gained unless commanders sorted out clearly in their own minds those essentials which were vital for success, and ensured that those things formed the framework on which all action was based. A body of general doctrine based on sound and well-founded operational principles – some determination as to how an army should fight – was fundamental for success in war. Principles had to be rigorously translated into operational planning, that is decisions on how an army or a force would fight in a particular situation or set of circumstances.

Application of his rational analysis to military historical examples and – more particularly – to recent experience in the Second World War suggested to Montgomery that the conduct of war was subject to regulating principles which were few in number and capable of being simply expressed. These identified prerequisites for successful military action. Certain points were fundamental, and to neglect any of them would probably lead to failure. They would apply, in a greater or lesser degree, to all commanders at all times. Earlier in 1944, in a keynote address after assuming command of 21st Army Group Montgomery spoke of 'the things that matter i.e. the basic fundamental principles on which everything is based: the 7 principles of war'.[1] His thoughts developed as a consequence of the fighting in Normandy, and by November 1944 he believed that it was possible to formulate eight such principles. 'I consider', he wrote, 'that these points form the principles of modern war'.[2]

As presented in *Some Notes on the Conduct of War,* Montgomery considered the eight principles of war in late 1944 to be, in order:

Air Power;
Administration;
Morale;
The Initiative [new 8th principle];
Surprise;
Concentration;
Co-operation;
Simplicity.

The great importance of some of his principles, Montgomery believed, had come to the fore only since the beginning of the War, and of others only since the start of the North-West Europe campaign. Nevertheless, Montgomery was precise as to the content of each principle. Later, he wrote: 'the last four [principles] are old stagers and can speak for themselves'.[3] These principles were not peculiar or unique to Montgomery. Some, like the principles of surprise, concentration, and cooperation, go back to Jomini and were also included in the 1920 *FSR* list, deriving from experience in the First World War.[4] By 1918 the General Staff recognised that firepower dominated the battlefield, but firepower alone could not destroy an enemy who was properly dug in. Their solution to this problem depended on the cooperation of all arms to overwhelm the enemy by weight of fire and enable the attacking infantry to manoeuvre without incurring unacceptably high losses. The British Army motorised to bring artillery and infantry into action closer to the centre of battle on the Western Front and to improve logistical efficiency.

The principle of simplicity also related to a particular strain of experience of the First World War. Operations on the Western Front between 1916 and 1918 had seemed to prove that cooperation could be achieved only by unity of control and careful planning to co-ordinate the work of supporting arms with the movement of troops across the battlefield. Planning, even of highly complex operations, had to remain as simple as possible, because the more complex a plan, the greater the chance that things would go wrong. The hierarchy in which Montgomery ranked his principles is one way they can be differentiated from other modern lists including War Office doctrine and Fuller's 1920 list.

Looking at Montgomery's most important principles of war in order to understand better their origin, and how they 'hang together', makes it easier to see how they formed a unified operational method, and also how they picked up on principles already established in British doctrine. Further, it makes clearer the relationship between Montgomery's eight principles of war – as listed above – and his war-fighting principles – which include a wider, more encompassing range of elements including, for example, command. In particular, it will show the importance of The Initiative – now ranked a principle – unlike the early 1944 list, where it was not.

A prerequisite for any successful military operation, or combined operation, was the use of *air power* to destroy or degrade the enemy air force's capacity to intervene in the ensuing battle. Air support was always vital in the tactical land battle but because fire support from the air was weather-dependent the aim should be to win with ground-based fire support. The air force's contribution of firepower was of great importance in assisting offensive operations by armoured divisions. Between the two world wars, the proper employment of aircraft in war as well as command and control arrangements for army air support was the subject of bitter debates between the two services. Army commanders sought the ultimate in close air support – aircraft under their direct control, in a ground attack role in the immediate battle zone – as being more important than other forms of combat aviation. RAF leaders emphasised air superiority, interdiction, long-range bombing, and centralised air force command and control. The first formal study of air power in relation to land warfare was Slessor's *Air Power and Armies* in 1936.[5] An important reason for the significant improvement in British combat performance in North Africa was more effective army-air force cooperation during 1942.[6] Generals Wavell and Auchinleck never appreciated fully the interdependence of air-ground operations and the necessity of a culture change. 'I was very much heartened to discover', Air Marshal Sir Arthur Tedder wrote, 'that co-operation with the Army had further improved, thanks, at least in part, to the lead given by Montgomery on this subject'.[7] The change came about after Montgomery's appointment to command the 8th Army. Principles espoused by Air Marshal Sir Arthur Conningham and the Western Desert Air Force system became the model for the application of tactical air power elsewhere in North Africa and in North-West Europe.[8] Montgomery had long understood the role and value of direct air support in wrecking an enemy command system and isolating a battlefield. Though only a qualified success, the Battle of Amiens, in August 1918, at which Montgomery was present as a staff officer with 47th Division, demonstrated the enormous potential that air forces had to isolate a battlefield and make a decisive impact on operations taking place on the ground. In 1926, he noted the vulnerability to air attack of lorry columns moving reserves to join the battle – a perceptive appreciation of the role and value of

directly supportive air interdiction.[9] Further, Montgomery's role was important because he was willing to concede air control. Also, Montgomery believed that the massed use of air power in support of ground forces was a battle-winning factor.

Montgomery felt that the tank's role demanded full use of their firepower and mobility – which in turn depended on the tanks being kept supplied and maintained. Thus, another prerequisite was good *administration*. Administrative arrangements in the rear must have a very definite relation to what it was intended to achieve at the front if a force including armour was to be kept supplied and problems of logistical breakdown avoided. The importance of problems of mobility and supply in operations was well-understood. This can again be traced to British experience in the First World War, British military thinking between the world wars, and also to British experience in North Africa.[10] The motorisation of logistics was a major achievement of the British Army before 1940. By late 1944, administration became crucial: keeping tanks supplied with fuel and ammunition, and mechanically fit had become a major problem. Montgomery's focus on the importance of administration provided excellent logistic support that sustained British fighting power in North-West Europe.

Montgomery also believed that 'the big thing in war is morale'.[11] A high, confident *morale*, based on a firm but fair discipline, the self-respect of the individual soldier, mutual confidence between soldiers and commanders, soldiers' confidence in their weapons and equipment, a sense of the justness of the cause for which they fight, and the spirit of the offensive was also a prerequisite. His military training at Sandhurst and his service before the First World War was at the time when the influence of General (later Field-Marshal Sir) Henry Wilson was crucial in the transmission to the British Army of an approach to war which flowed from the Napoleonic model as interpreted by Clausewitz and Foch.[12] Wilson, 'a life time Francophile […] hit it off from the start with […] Foch, his French opposite number'.[13] Foch had placed great emphasis on the psychological factors in war. However, Montgomery's later view did not conflate this belief with adherence to an approach to war derived from Clausewitz or Foch.[14] He had learned the importance of careful planning, as well as meticulous logistical preparation as

a staff officer with 33rd and 47th divisions in General Sir Herbert Plumer's 2nd Army in 1917 and 1918. Montgomery's later views did not easily reconcile with his earlier training. The key to high morale was success in battle with casualties held at acceptable levels. The strengths of 21st Army Group, which were firepower and movement, if employed to maximum effect, would ensure that any operation launched would have the best chance of success possible with the least possible number of casualties.

Finally, Montgomery's was concerned with remaining balanced throughout his operations. It was necessary to quickly gain, and to keep, *the Initiative* and constantly to create new reserves. The enemy commander must discover that he had the wrong plan, and the wrong dispositions. One's own dispositions must be flexible enough to be altered in response to the developing tactical situation but a force must be so well balanced and poised that enemy thrusts could be disregarded. A military situation which was untenable for the enemy was achieved by launching a hard blow, with all arms *co-operating*, on a narrow front, in accordance with the principles of *surprise* and *concentration* – particularly if opportunities could be created for armour to penetrate into the enemy's rear areas to dislocate his lines of communication. Planning was vital. A good plan was a *simple* plan. The first requirement of a simple plan was that each component part of the force should have its own task to carry out, and its operations should not be dependent on the success of other formations or units.[15]

There were other points which were important but which were not ranked amongst these eight principles of war. The most centrally important of these was that each commander, clear as to the points which mattered on his own level, must exercise his initiative to be proactive. Commanders of large formations must give careful thought to disposing their forces to best effect, in accordance with the overall plan. Skill in grouping and initiative in quickly re-grouping to meet the changing tactical situation played a large part in successful battle operations, and was required of commanders of both large formations and smaller units.[16] Montgomery had attacked at El Alamein along a series of different thrust lines, but with the reserves necessary to exploit success. He employed this technique again at Mareth (Tunisia 1943) and around Caen during his attempts to take the city (June and August 1944).

Montgomery's temporary loss of the Initiative, at Arnhem, must be acknowledged. However, he moved to recover quickly.

It further became obvious that all commanders must be conversant with the operational handling of both the armoured and the infantry division and with the employment of artillery. Between the two world wars there was an expectation among some military writers and soldiers that armour should be developed to become the predominant arm of the army. The tank, Montgomery felt, was only one, albeit very important, weapon. The operational handling of tanks required no more skill than that required for any other weapon and certainly no special skill. Armour would not be developed to become an élite among 21st Army Group.

What *The Armoured Division in Battle* had to say about the role for armoured divisions under modern conditions completely contradicted what was said in *MTP* No. 41 *The Tactical Handling of the Armoured Division and its Components* (1943), Part 1, *The Tactical Handling of Armoured Divisions* (July 1943), which outlined their place in the War Office's concept of operations. That place was the mobile role:

> It is a mounted, hard-hitting formation primarily constituted for use against hastily prepared enemy defences, for exploitation of initial success gained by other formations, and for pursuit. It is designed for use in rapid thrusts against the enemy's vitals, rather than hammer blows against his organised defences.[17]

Thus, the roles of an armoured division included a wide sweep round an enemy's flank to strike his rear communications and cut off his retreat; a rapid pursuit through a breach made in the lines by other formations so as to effect the complete destruction of the enemy; and, or, cooperation with other arms in the defence, usually by counter-attack and to hold the enemy off at arms' length and prevent him interfering with operations.[18]

This contrasted sharply with Montgomery's view in *The Armoured Division in Battle* of what an armoured division was essentially for and its tactical roles, which flowed from his definition of a tank as 'an armoured vehicle designed to carry about fire-power'.[19] For him, the armoured division was to be used for 'hammer blows' or 'colossal cracks'; the mobile role was less important. *The Armoured Division in Battle* presented the armoured division as a combined arms force. In an attack on a main enemy defensive

area which had been partially or wholly broken into by other arms, the armoured division would maintain the momentum of the attack by driving in the enemy rearguards and seizing key terrain (usually high ground) on which to establish infantry – anti-tank defences in order to release the tanks to retire or take part in a further attack.[20]

It is possible to see here resonances, echoes and elements of ideas which by December 1944 had come to be accepted as the right ones in 21st Army Group and which can be associated with particular commanders, for example Carver. SP anti-tank gunners must lose the idea that their true role was as a mobile reserve as per War Office teaching, and that anti-tank protection of forward defence lines was the job of the towed gun. The tanks were best trained and equipped to provide the mobile reserve, and what self-propelled anti-tank guns there were should be used to release as many tanks as possible for this job. Thus, instead of being used in an offensive mobile role as tank-hunters, their tactical role should be flank protection and reinforcement of the anti-tank defence of armoured and infantry units in a largely static role, the role in fact envisioned by the War Office for the towed 17-pdrs. Thus:

> The first aim of the attack is to capture ground, the second to hold it. Supporting weapons must be got up quickly to help the reorganisation. Initially the tank is the best supporting weapon as it has fire power and mobility. But anti-tank guns must be got forward quickly so as to free the tanks, and allow them to be rallied in not less than squadron packets. These [i.e. the tanks] are then available to deal with counter attacks, and for a further mobile and offensive role.[21]

It is also possible to see the influence of Roberts's 'homogeneous brigades' idea, a term which it appears Roberts invented. This new type of tactical formation embodied the principle of tactical cooperation in a way its author thought most appropriate in the light of 11th Armoured Division's experience in Normandy. Thus:

> In close country or when anti-tank devices abound, the infantry brigade closely supported by tanks should lead. In order to achieve this close support, it will probably be best to group the division so that there are two homogeneous brigades.[22]

It had been thought that the armoured division was particularly suited for employment in the fast moving, fluid battle after the breakout, in which its capacity to engage and defeat such enemy tanks as survived was likely to

prove decisive. Recent battle experience, however, showed that it was usually the enemy anti-tank gun or self-propelled gun, dug-in and lying in wait, which did the damage and not the enemy tank.[23] There was still no fast-flowing battle. One of the reasons for this was that by removing the turret from a tank the Germans could accommodate a bigger gun in a fixed superstructure (see Plate 4). This had the added advantage of a low silhouette.

However, Montgomery felt no plan for the employment of armour would be sound that does not exploit to the full tanks' characteristics of firepower, armoured protection and mobility, in that order.[24] The general technique or governing tactical principle must be movement, accompanied by fire directed against the enemy. British armour should not be used as self-propelled artillery because that would vitiate the principle of 'fire and movement'.[25] In terms of firepower, *The Armoured Division in Battle* demonstrated that Montgomery had become a convert to the idea that there should be only two types of tank: the dual purpose 'capital' tank, for fighting, and the light tank, for reconnaissance.[26] In laying down such a policy for 21st Army Group Montgomery was advocating something which was new – the desert appearing to many merely to confirm the soundness of the RAC's existing doctrine and methods. It was also further at variance with War Office policy, which was officially to accept the bifurcation in armoured doctrine. Montgomery's 'ubiquitous' use of armour – he hoped – would allow flexibility when planning the battle and not force a commander to keep a percentage of his armour unemployed at important phases, and increase speed of action. 'Ubiquitous' is used in *MTP* No. 41 to describe the 'infinite variety of tasks' which infantry could undertake.[27] However, considerable preparation and planning was to precede each operation to ensure the best use of available firepower.

The purpose of enumerating the roles in battle of the armoured and infantry divisions as well as the basic points of tactical tank-infantry cooperation was to provide guidance as to those fighting techniques and procedures deemed of particular importance by Montgomery, in order to ensure that the two types of division were employed in the best way possible. Improved armour unit-infantry unit cooperation, tied in appropriately to tactical artillery fire plans and fire support from the air, could be a solution to

the problem of the enemy enjoying the possibility of long-range tank, or tank hunter fire from excellently camouflaged positions well-protected by anti-tank weapons – the problem which had tended to make the security of British tanks a function of their distance from the enemy. An informed pragmatism was required of commanders as to how these points should be applied 'in action'. Success in battle was what mattered.

The set piece attack to break into, or through, a main enemy defensive area was the most important role of the infantry division. Its other potential roles included the follow-up of an enemy force conducting a fighting withdrawal, temporary defence, the crossing of a contested water obstacle and an assault landing on an enemy held coast. The success of a set piece attack in depth flowed in the first instance from the successful manipulation of adequate reserves: fresh troops must be ready to go through in the wake of the assaulting infantry and tanks and maintain the momentum of the attack even if the attacking troops had not got all their objectives. Although not the primary – or even a suitable – role for an armoured division, the tanks of an armoured division could contribute to maintaining the momentum of the attack by attacking the enemy's flanks, and where a gap had been achieved in the enemy's defences by other tanks and the infantry, by moving through it to create the conditions for a strike at the enemy's lines of communication. Secondly, the start line must be secure: if it was not the enemy might be able to disrupt the whole plan of attack. Thirdly, the assaulting troops must be assisted forward by adequate and well-directed air and artillery fire support. Fourthly, assaulting infantry and tanks must keep close up to this supporting fire and be ready to assault the enemy immediately it lifted. Fifthly, supporting armour must keep touch with the assaulting infantry; anti-tank guns must be got forward quickly. Finally, once the attack had started, the enemy must be given no respite in which to reorganise and collect reserves. After the enemy had been driven from his defensive positions and the battle was now mobile, the principal roles of the armoured division in battle were exploitation and pursuit. In an armoured division, the Armoured Reconnaissance Regiment – equipped principally with Cromwells, later Comets – was an additional armoured regiment.[28]

The basic points of how tanks and infantry should co-operate, according to

The Infantry Division in Battle were firstly, infantry and tanks should 'marry up' early; secondly, before every attack tank officers should personally and carefully observe the ground in order to assess tanks' ability to get over the country between the start line and the objective and note obstacles placed by the enemy; thirdly, the formation adopted would depend on topography, among other factors: in open country tanks would usually lead on to the objective and in close country infantry would lead; fourthly, the first task of the tank working with infantry was to destroy enemy unarmoured troops – not to engage enemy tanks; fifthly, good communications were essential between the two arms; finally, tanks' need for ammunition, fuel and maintenance would always limit the length of time they could spend 'in action'.

In addition to its special training in the reconnaissance role it was now laid down that the Armoured Reconnaissance Regiment of an armoured division should be practised in cooperation with infantry.[29] How this worked out in practice is explained in one case as follows: 'we carried them [the Hereford Regiment infantry] on the back of our tanks'.[30] It can be assumed that the concession that under certain conditions the infantry could lead closely supported by tanks was a tactical lesson learnt in the fighting in Normandy (and southern Holland): often poor tank country, hedgerows, orchards and stone farm buildings of Normandy and canal bends, deep ditches and buildings in southern Holland gave the enemy enfilade fire and excellent cover for anti-tank weapons.

8.3 The pamphlets: their doctrine in action

The crossing of the Rhine in1945 it is generally held – for obvious reasons – represented a further important turning point in the chronology of the 1944-45 North-West Europe campaign. Here, the phrase 'the advance to and from the Rhine' is used to give an overall shape to campaign events, including 21st Army Group's advance from the western borders of Germany to the banks of the Rhine and, once over the Rhine, the final assault on Germany. These also mark a crossover from the penultimate to the final phase of the campaign. Thus, although they were different phases of the campaign, they can and

should be seen as one framing contextual event, or turning point.

Secondly, although less obvious, the first phase or advance into Germany, then the advance from the Rhine can be taken to represent an important metaphorical watershed in the progress of the campaign over time for 21st Army Group as well, for the following reason. In the last three months of 1944, the 21st Army Group pamphlets on the armoured and infantry divisions were intended by Montgomery to be the summation of the principles of war as he understood them. They were also, in practice, syntheses of the methods which had come to be widely accepted as the right ones among commanders whose opinion he valued.[31] These pamphlet 'primers' summarised the principles or methods by which it was known – by Montgomery and his senior officers – that certain results could be achieved. Thus, this period saw the emergence of the final doctrine for the final 'from the Rhine' phase of the campaign. Further, the winter of 1944-45 was a testing or settling in period for the new techniques. Initially, the new and the old offensive techniques existed alongside each other. The importance of the Rhineland battles in early 1945 is that they were the 'laboratory' for the wider adoption of the new techniques by 21st Army Group. The backdrop was the advance to the Rhine and preparation for the final assault on Germany; and the projection on to the east bank of the Rhine of sufficient infantry and armour to establish a secure and viable bridgehead.

There is a final way in which the crossing of the Rhine marked an important watershed for 21st Army Group, which requires the 'before' and 'after' to be considered together (with much less attention or emphasis placed on the actual crossings themselves than has been usual). New tactical problems in 1945 served to unpick some of the threads in the tapestry as woven by late 1944. The changing nature and context of operations put at issue whether the new doctrine and system Montgomery outlined in late 1944 could survive the transition to a new and different type of warfare across the Rhine on the north German plain in the spring of 1945.

The case of Barker and VIII Corps both before and after the Rhine Crossing demonstrates what Montgomery was after from a corps commander. Montgomery was interested in people who could tell him what could work in tactical lessons, rather than in operational ones. Thus, we find that Barker

‘spent most of the day [12 Jan 1945] writing a paper for Monty on the Div[isional] Reconnaissance Reg[imen]t reorganisation’.[32] A Corps Commander was not allowed much leeway in the planning of operations, as Barker soon found out: ‘Bimbo [Dempsey] came over this a.m. to talk futures which were completely changed this eve[ning]. I’m getting v[ery] annoyed with these continual changes. It’s been going on ever since I took over here. However I suppose it must be but its damnably annoying’.[33] ‘I always knew a Corps was a poor[?] job except when actually in active operations’, he explained (9 March 1945). Even as a corps commander, Barker was not allowed latitude to change the master plan.

The speed of the advance was now paramount; at the operational level it was essential to prevent the Germans regaining their balance. However, there was also a change to a different kind of warfare. Battles became a matter of deploying and attacking small groups of the enemy defending key points or finding a way around them, as Barker noted:

> Boche opposition is purely packets of chaps holding centres of roads and trees and some demolitions. I’ve now got an Airborne [Division], and an Arm[oure] d Div[ision] so I’m getting set for a quick run in a N.E. direction. Opposite Jorrocks [Horrocks] and Neil [Ritchie – GOC XII Corps] the para boys [the German First Parachute Army and/or the HJ] are still putting up a good fight but are getting worn down and reduced in numbers.[34]

Each parachute brigade within the Airborne Division had attached a Churchill tank squadron from 4th Tank Grenadier Guards, 6th Guards Armoured Brigade.

Allowing for the fact that VIII Corps was launched against German Army Group H’s weak left flank, by 31 March his corps had bridged and crossed the River Ems and were making for the Ems Canal ‘which no doubt will have all bridges blown – we already know that one is. Then Osnabr[ü]ck. […] We have been going too fast’.[35] The significance of this remark is that, despite problems such as the Germans’ extensive use of demolitions, Barker still showed himself well able to take advantage of opportunities for rapid advance.

The German Army was, however, capable of determined resistance by individual units, battalions or divisions until the very end of the war: on 1 April Barker recorded: ‘the Boche continue to put up a fight with quite a

number of 88s. All sorts of training battalions are being identified and the prisoners range between all ages'.[36] This is almost certainly a reference to the defence of Lengerich by NCO officer candidates. These men, offering strong resistance, were aided by the thick woods which made observation, and artillery and close air support difficult. However, the advance to Osnabrűck, which began on 3 April 1945, represented an important milestone – the Germans had no hope of organizing a firm defensive line before the next water barrier, the Weser, at which point and by which time VIII Corps would have advanced 125 miles from the Rhine.

34th Armoured Brigade did not take part in PLUNDER or in the advance from the Rhine, but during the course of operations across the Rhine it became apparent to Greenacre, like Clarke, that additional firepower would be necessary to address the problem that even the up-gunned Mk VII version of the Churchill in 34th and 6th Guards armoured brigades, which featured many design improvements but was too narrow to take the larger turret required for the 17-pdr gun, 'in its present form cannot shoot it out with the Tiger or Panther owing to the superior gun and frontal armour carried by these two German types. For this reason it was always necessary to have attached a b[at]t[er]y or t[roo]ps from an S.P. A[nti] T[an]k Reg[imen]t equipped with 17 Pdr guns to give protection to the tanks if attacked by enemy armour'.[37] It will be recalled that it was Greenacre's later view that it is seldom that an Independent, Churchill-equipped Armoured Brigade would fight 'independently' as a Brigade because this conflicts with the principles of war as laid down both by Montgomery's pamphlets and by Field Service Regulations (i.e. principles that remained unchanged in Montgomery's list.[38]

Greenacre's view as expressed here, however, represents the 'official' perspective. In practice, over the Rhine, in the advance to Műnster, 6th Guards Armoured Brigade (less 4th Tank Grenadier Guards) was to operate for the first time under its own Brigadier and not in support of an infantry division. The task given 6th Guards Armoured Brigade Group was to make a rapid breakout carrying the paratroops of 513th Parachute Regiment, US 17th Airborne Division on the tanks. Greenacre had little or no rest or sleep for three or four nights at this time. They were 'irretrievably committed to get on'.[39] In the face of this overwhelming need to get on, inevitably there were

tactical mistakes: outside Műnster, the two rearmost tanks of a troop were hit from close range by concealed 88s which had let the head of the column go through and then pounced on the tail, which might not have happened had the time been taken to reconnoitre.[40] In the advance from the Rhine to Műnster by the Coldstreams and the Scots Guards of 6th Guards Armoured Brigade Group, with the American paratroops riding on the tanks, the Armoured Brigade was, however, thus operating in a new role. The implicit lesson Greenacre drew was that 6th Guards Armoured Brigade had fulfilled the requirement of 'ubiquity' demanded by Montgomery for all armoured brigades and that a Churchill-equipped armoured brigade was 'capable of swift inclusion in the order of battle for any particular operation', so long as the issues of the Churchill's lack of a really first class anti-tank gun, as well as the need for armoured engineers were addressed – as had been the case in 6th Guards Armoured Brigade Group.[41]

Because Carver was on the same wavelength as Montgomery he too did not end up getting the sack as did other commanders who differed from Montgomery in this way. Like Greenacre, he is indicative of a specific type of brigadier: however, Carver in particular was one who was creative in the process of learning lessons over a longer period of time and applying them at a more general level than his own specific unit. Because of the success of these new lessons he was able to hold on to his job, despite the fact that he did not agree with Montgomery on everything.

Plate 16 Diamond T tank transporter and 40-ton trailer with Comet tank. By the end of the Second World War, tank transporting was an established and essential part of the mobility of British armoured formations. The photograph epitomises the excellence of British armoured division transport and logistics in the closing months of the War (author's own photograph taken at the Museum of Army Transport, Beverley, Yorkshire).

At the end of March 1945 Carver, acting as he had during the Udem-Sonsbeck battle in the Reichswald, again formed two armoured/infantry battlegroups, the infantry of one being carried in Kangaroos – in effect APCs. Having reached Ochtrup on 3 April 1945 4th Armoured Brigade were switched to the command of 52nd Infantry Division to turn east for Rheine, cross the Dortmund-Ems canal and continue the advance beyond. It was an unsatisfactory period for an armoured brigade which had been in action in Normandy: 52nd Division, which had not, was 'not an easy formation to work with'. The reasons included: 'their commander, Major-General Hakewill-Smith, was elderly, 49 years old, and their methods […] pedestrian[:] Hakewill-Smith's 'order groups' […] were dominated by his Commander Royal Artillery'.[42] Complete dependence on artillery firepower, to be effective, called for rapid forward movement even in a direct frontal assault. In Carver's view, 52nd Division's commanders lacked the speed of

thought and action essential for mobile operations (see also Plate 16).

This was also Montgomery's view, from his TAC HQ now at Rheine. He sent Major P. Earle, his new Liasion Officer, who had come as a replacement for the wounded Major Mather, to see Hakewill-Smith, 'to find out why he [Hakewill-Smith] was getting on so slowly'.[43]

In addition, in 52nd Division, commanders did not have realistic expectations of what the tanks could achieve in the light of the difficulties that they faced. These difficulties came particularly from hand-held weapons and anti-tank guns in built up areas which were the strategic nodal points through which they had to operate because of being largely road-bound.[44] Some officers at lower level thought that the tanks were letting them down because of not actually fully comprehending the new understanding of the roles of armour and infantry in the changed conditions of combat.[45] The lessons Carver drew from grouping an armoured regiment and a motor battalion in half-tracks, and an armoured regiment and an infantry battalion in Kangaroo APCs in the April 1945 battles were that:

> in execution [of] a deliberate attack, full use must be made of mobility to achieve surprise in time and direction, of the armour of the arm[oure]d personnel carrier to protect the inf[antry] in their approach as close to the objective as possible, and of the immense fire-power [of tanks] available to reduce the infantry's task as far as possible to the mopping up of demoralised defenders and protection of the tanks from close-range A Tk weapons. Converging attacks from the enemy's flank or rear offer the best prospects of success.[46]

These lessons were counter to the approach which prevailed among 52nd Division officers. The allocation of a squadron of Kangaroo APCs to allow infantry accompanying tanks armoured mobility – the difference between poor practice and very good practice in spring 1945 – was not repeated while 4th Armoured Brigade was under command of 52nd Division.

After its deployment at the end of October 1944, Hakewill-Smith's 52nd Division nonetheless performed creditably in a number of important operations in North-West Europe.[47] On its deployment, 52nd Division had a unique advantage over other divisions at that time: it retained most of its original officers. They had experienced the period of training in the UK. However, they now faced the special challenge of tactical learning informed by lessons from current experience of action, at the very stage of the

campaign when there were few experienced officers to be spared from other divisions to spread their experience to 52nd Division. Thus, although 52nd Division's late deployment to theatre was a factor affecting the new doctrine's application by those charged with tactical leadership in what had been 'the last major reserve formation in the British Army', despite the shortcomings identified by Carver, by eventually performing in the manner envisaged by Montgomery they were considered to have acquitted themselves well enough. Indeed, in the view of one senior commander, by the last battles of the campaign 52nd Division was to become 'one of the best divisions in Twenty-first Army Group'.[48] The inference can be made that this success can be put down to 52nd's willingness to learn from the pamphlets (among other sources and means of communication) to bring themselves quickly up to speed.

The climax of Carver's achievement with his battlegroups in carrying out Montgomery's wider plans was 4th Armoured Brigade's breakout of the Aller bridgehead north-east of Verden on 14 April 1945. Montgomery could now implement his plans for 21st Army Group's final advance northwards to the Baltic. Advancing to victory, well-planned, surprise encircling movements combined firepower and mobility to great effect. The breakout, carried out by 4th Armoured Brigade at Westerwalsede, which was heavily defended by German anti-tank guns, showed just how far the British Army had come from the days when the German '88' gun line had so often confounded their best attempts to find success in armoured warfare.

Ten months after PERCH – when 22nd Armoured Brigade, 7th Armoured Division had been attacked while it was strung out through Villers-Bocage – elements of 6th Guards Armoured Brigade which had recently occupied Stadensen during the battle for Uelzen were attacked by *Panzer-Division Clausewitz,* the last panzer division created by the Wehrmacht. The 22nd Armoured Brigade was attacked when the leading tanks and infantry transport were stationary and backed up; when they had arrived the night of 14/15 April 1945, the Churchills, the S.P.s and the Infantry transport of the Coldstreams had been forced to cram themselves into the village street, nose to tail. As at Villers-Bocage this had added considerably to the difficulties: German S.P.s and half-tracks, having got into Stadensen 'proceeded to play

havoc with anything they saw'.[49] However, although there were undoubted British failings at Stadensen, 'as [German] tracked vehicles tried to get away, they were struck by the Coldstream tanks, ably assisted by the M10.s [i.e. tank destroyers mounting the 17-pdr] and by the 6 pdrs. of the Infantry'.[50] The enemy who remained in houses were dislodged with H.E. fire. The speed at which operations were conducted was maintained. The success of the resumed assault on and capture of Uelzen maintained the momentum of the British advance to the Elbe – now only some thirty miles ahead – and denied the Germans the possibility to organise any further strong opposition west of the Elbe in sufficient time.

8.7 Summing up Montgomery's pamphlet writing as practiced in operations

New tactical problems in 1945 served to unpick some of the threads in the tapestry Montgomery had woven. He had realised there would be no easy or rapid advance into Germany. Montgomery sought to edge his subordinate commanders away from repetitive tactical repertoires, not only with the intention of imposing mobile war on the enemy per se but also of creating the relationship between conceptual and material superiority which would bring material superiority to bear to greatest effect in changing circumstances. New 'best practice' within the ground-rules Montgomery had laid down in the pamphlets was seen to be embodied in the methods employed by Carver's 4th Armoured Brigade, Greenacre's 6th Guards Armoured Brigade, and Barker's VIII Corps after the Rhine Crossing. The advance into Germany and the breaching of the Rhine barrier itself preparatory to the advance from the Rhine was important for the command, operational and tactical development that took place. Under Montgomery's general direction, this yielded a specific doctrine as a framework for action and – more importantly – a specified manner or general style of command as the framework of action. The changing nature and context of operations put at issue whether the new doctrine and system Montgomery outlined in late 1944 could survive the transition to a new and different type of warfare across the Rhine on the north German plain in the spring of 1945, but the evidence suggests that it did.

In his pamphlets, Montgomery identified the problems of fighting with the tools at his disposal – infantry and tank divisions and supporting air power – and indicated how he believed they should be tackled in the remainder of the war against Germany. Armoured brigades, whether part of an armoured division or independent, equipped with the same sort of tank, all equally capable of undertaking the roles of infantrysupport, exploitation and pursuit – combined with an appropriate concept of tactical handling should be and were enshrined as part of the solution. Fire support from the air, as well as from artillery, was also part of the solution, because this concept was an integrated air battle-land battle.[51] With his failure at Arnhem, Montgomery had realised there would be no easy or rapid advance into Germany. As a result he had come to recognise that changes in tactical practice were required to deny the enemy the possibility of security by timely withdrawal across the Rhine. Thus, the doctrine outlined in November and December 1944 reflected the lessons of the past but projected them forward into the immediate future as the means to meet and overcome the new challenges that were now evident.

In Normandy, the Germans, fighting determinedly, were also discovered to be adept at the speedy redeployment of their superior armour to block any British penetration. An important thread in the tapestry had come loose. Manoeuvring to bring firepower to bear on the enemy was the essence of Montgomery's method. In the last months and weeks of the war this was now actually more difficult. The opposition was organised, but not continuous, either in front or depth. Henceforth, the campaign was going to be a matter of deploying and attacking small groups of the enemy defending key points or finding a way around. Although German formations were rarely up to strength they retained cohesion. This explains the shift from Montgomery's change in perception of 'initiative' (as something that is essential for success in battle) to 'Initiative' as a main principle of war.[52] The principle that infantry, tanks and self-propelled artillery should co-operate together to a closer degree had been established but the need for subordinates to exercise their initiative became imperative if the necessary momentum or tempo for practising this in mobile operations was to be achieved and maintained. It was this combination that would finally break the cohesion of the Wehrmacht

in the west.

The orientation that had previously sufficed was experience of ‘what to do’. By late 1944 and into early 1945 the experience of ‘quick thinking’ within the goals of the master plan, rather than any specific action, was the solution. Because of the lessons learned, the new doctrine that was institutionalised was intrinsically able to cope with a different type of warfare and thus was successful. As Montgomery advanced to and began to undertake his successful crossing of the Rhine, because of the initial innovation there was no further need to innovate. The doctrine he had created could now handle, adapt to, and account for the change in the kind of warfare that 21st Army Group confronted in the final months of the war in Europe.

1 Montgomery, address to the general officers of the armies under his command at Headquarters, 21st Army Group, St. Paul’s School, London, 13 January 1944, quoted in *Montgomery and the Battle of Normandy* ed. by S. Brooks (London: Bodley Head, 2008), p.27.

2 *Conduct of War & Infantry Div. in Battle, Conduct of War,* paras. 1, 2 and 3.

3 21st Army Group pamphlet, *High Command in War* (June 1945), quoted in Alger, *Quest for Victory: Principles of War,* p. 253.

4 Eight ‘principles of war’ were drafted for *FSR, Volume II, Operations* (1920) by Colonel (later Major-General) J.F.C. Fuller. These were: Maintenance of the objective, Offensive action, Surprise, Concentration, Economy of force, Security, Mobility, and Co-operation.

5 Gp Capt. J.C. Slessor, *Air Power and Armies* (Oxford: Oxford University Press, 1936).

6 R. Hart, *Clash of Arms*, p.124.

7 Lord Tedder, *With Predjudice: The War Memoirs of Marshal of the Royal Air Force Lord Tedder* (London: Cassell, 1966), p. 355.

8 The author is indebted to Ross Mahoney, University of Birmingham, for information on Conningham’s principles for Army-Air Force co-operation, ‘Allied fighting effectiveness in North Africa and Italy, 1942-1945’ KCL/IWM conference, 18-19 July 2008, Session 7: The air power contribution to land operations, Q&A.

9 Maj. B.L. Montgomery, ‘Some Problems of Mechanicalisation’, 196.

10 Wavell considered ‘common sense’, based on ‘a really sound knowledge of the ‘mechanics of war’, i.e., topography, movement and supply’ to be a fundamental requirement of sound generalship, and did his best to put this dictum into practice in the Middle East, Gen. Sir A. Wavell, *Generals and Generalship,* The Lees Knowles Lectures for 1939 (London: Times, 1941), p. 8 quoted in H.E. Raugh, *Wavell in the Middle East 1939-1941: A Study in Generalship* (London: Brassey’s, 1993), p. 255; Professor Kenneth Startup whose 1977 MA dissertation remains an essential reference work for O’Connor said ‘I well remember how Sir Richard emphasised to me that his greatest challenges were transport – and water, (closely related matters, of course)’, Professor K. Startup, personal communication to the author, 13 July 2004; Gen. Sir David Fraser to the author, 30 June 2004, Fraser, *And We Shall Shock Them,* pp. 115-116.

11 Forrester, ‘Great Captains and the Challenge of Second Order Technology: Operational Strategy

and the Motorisation of the British Army before 1940', pp.77-79; Montgomery, *Conduct of War & Infantry Div. in Battle*, p.1; '21st (British) Army Group in the Campaign in North-West Europe 1944-45', *RUSI Journal*, Vol.90, no.560 (November 1945): 430-54, esp.452.

12 Larson, *The British Army*, pp.47, 49.

13 K.Jeffery, *Field Marshal Sir Henry Wilson*, (Oxford: Oxford University Press, 2006), p.73.

14 Montgomery, *History of Warfare*, p.472.

15 *Conduct of War & Infantry Div. in Battle*, *Conduct of War*, paras. 4-16; *Armoured Div. in Battle*, paras. 10, 12, 14 and 16.

16 *Conduct of War & Infantry Div. in Battle*, *Conduct of War*, paras. 17 – 34.

17 *MTP* No.41, Part 1 (July 1943), Ch.I, Section 2, para.5.

18 Ibid., Section 3, para. 7.

19 *Armoured Div. in Battle*, Introduction, para.3.

20 Ibid., para. 30.

21 Ibid., paras 5 and 62 (quoted).

22 *Armoured Div. in Battle*, para.64.

23 Ibid., para. 8.

24 While working in Verney's papers this author was intrigued to find that Verney had made alterations and annotations on his personal copy of *The Armoured Division in Battle* e.g., inverting Montgomery's list of the main characteristics of an armoured division and placing 'mobility' first, which makes Verney's removal from command of 7th Armd Div in late 1944 easier to understand.

25 *Armoured Div. in Battle*., paras.10, 11 and 13.

26 *Armoured Div. in Battle*, paras. 5 and 6.

27 *MTP* No.41, Part 1 (July 1943), Ch. II, Section 5, para.22.

28 *Conduct of War & Infantry Div. in Battle*, paras. 8, 9, 13-21; *Armoured Div. in Battle*, paras. 12, 23-38.

29 *Conduct of War & Infantry Div. in Battle*, paras. 50-57; *Armoured Div. in Battle*, paras. 5 and 6.

30 The Earl of Harrington, interview with the author, February 2004. Capt. the Earl of Harrington commanded 4th Tp, 'B' Sqn, 15th/19th H, Armd Recce Regt, 11th Armd Div. He is referring to action during the advance to the river Aller during 13-14 April 1945. The tanks referred to were still Cromwells. 'B' Sqn did not re-equip with Comets until the end of April, Anon. [?Maj. G. Courage], *'Campaign Diary': The 15th/19th The King's Royal Hussars, North West Europe, 1944-45* (RHQ, Palestine, 1946), p. 29, personal copy of Maj.- Gen. Sir W.R.N. Hinde, made available by Mr Ralph Thompson, The Light Dragoons (15th/19th King's Royal Hussars) Museum Collection, Newcastle-upon-Tyne.

31 See also IWM, Montgomery Papers, 126/57, Montgomery to Lieut.-Gen. R.M. Weeks [Deputy Chief of the Imperial General Staff], 21 February 1945, for more evidence that Montgomery worked with others in this way.

32 Barker MSS, Lieut.-Gen. E.H. Barker to his wife, 12 January 1945.

33 Barker MSS, Lieut.-Gen. E.H. Barker to his wife, 12 February 1945.

34 Barker MSS, Lieut.-Gen. E.H. Barker to his wife, 28 March 1945.

35 Barker MSS, Lieut.-Gen. E.H. Barker to his wife, 31 March 1945.

36 Barker MSS, Lieut.-Gen. E.H. Barker to his wife, 1 April 1945.

37 IWM, Greenacre Papers, 94/33/1, 'Lessons from the Campaign in France, the Low Countries and Germany from an Independent Armd Bde point of view, June 44-May 45', by Brigadier W.D.C. Greenacre, p.4, para. g.

38 Ibid., p.1, 'General [remarks]'.

39 IWM, Greenacre Papers, 94/33/1, ms notes on the advance of 6th Guards Armoured brigade from Wesel to Műnster, 26 March-2 April 1945, by Brig. W.D.C. Greenacre.

40 [Lieutenant] T.E.P. Gilpin [Tank Commander, 'S' Sqn, 3rd Tk SG, 6th Gds Armd Bde Gp, 1945] to the author, 10 Dec 2005; P. Forbes, *6th Guards Tank Brigade: The Story of Guardsmen in Churchill Tanks* (London: Sampson, Low, Marsden, [n.d.], p. 137.

41 IWM, Greenacre Papers, 94/33/1, 'Lessons from France, the Low Countries and Germany', p. 1.

42 Carver, *Out of Step*, pp. 214-5.

43 Maj. P. Earle, personal diary entry, 8 April 1945, quoted in A. Horne with D. Montgomery, *The Lonely Leader; Monty 1944-45* (London: Macmillan, 1994), p. 325.

44 Carver, *Out of Step,* p. 215.

45 London, National Army Museum (NAM), Hakewill-Smith Papers, 9012-28-41-1, 'Actions Of Drierwalde And Hopsten On The Nights 4/5 and 6/7 April by 156 (West Scottish) Bde', Attack [on Dreirwalde] by 'B' Coy 6 Cameronians (Capt McNeill); by 'D' Coy [on Hopsten] (Capt Watson). These criticisms were omitted from the accounts of the fighting in Dreirwalde and Hopsten in the history of 52nd Division; G. Blake, *Mountain and Flood: History of the 52nd (Lowland) Division,* (Glasgow: Jackson, Son & Co, 1950).

46 IWM, Carver Papers, Papers relating to 4th Armoured Brigade and 7th Armoured Division, Brig. R.M.P. Carver, 'Operations of 4th Armoured Brigade 14-19 Apr 45', Part II: 'Lessons', p.23.

47 Pre-eminently, Operation INFATUATE (1-5 November 1944) – the attack on Walcheren island in the Scheldt estuary by Commandos and 52nd Division.

48 Lieut.-Gen. Sir B.G. Horrocks, with E. Belfield and Maj.-Gen. H. Essame, *Corps Commander* (London: Sidgwick & Jackson, 1977), p. 216.

49 Forbes, *6th Guards Tank Brigade; Churchill Tanks,* p. 169.

50 Ibid., p. 169.

51 On 8 February 1945, for example, numerous attacks would be made on 'known enemy headquarters and their signal systems' including a rocket-firing Typhoon attack against 1st German Parachute Army HQ at Emerich, as well as attacks on railway lines and traffic heading for the Rhine. Further, at the time of the Rhine Crossing in March 1945, AVM Broadhurst, commanding 83 Group, had air control of the battlefield in a semi-circle of fifty miles radius beyond the Rhine, Ellis, *Victory in the West: Normandy*, pp.260 and 287.

52 cf. Montgomery's address at St. Paul's School, London, January 1944, quoted in Brooks, *Montgomery and Normandy*, p.27 with the list in *Notes on the Conduct of War* of November 1944.

9

Monty’s Functional Doctrine: the Factors that Produced it; and his Framework of War

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9.1 How the factors fit together to produce a framework of war

This book set out to use a combination of new perspectives and new factual evidence to present a reinterpretation of how 21st Army Group produced a successful combined arms doctrine by late 1944 and implemented this in early 1945. The key to understanding how this outcome developed lies in understanding the ways in which the two processes of fighting and the creation of doctrine interrelated. This required both a conventional focus on command and a cross-level study of Montgomery and a significant group of commanders. The issue of whether or not this integration of combat arms (a guide to operational fighting capability) had any basis in a common doctrine is an important one. A third interrelated contribution is in answering how Montgomery commanded, and whether, and to what extent, doctrine was imposed or generated. In particular, the book explains how doctrine was evolved and, more especially who was responsible for providing the crucial first drafts, and the role Montgomery played in revising, codifying and disseminating it.

It is clear from early chapters that the roots of the ideas of contenders for what *should* happen, compared to what actually happened lie in debates and developments well before 1944. It is also shown that, despite later success, Montgomery’s early experience and mental outlook had not prepared him for the challenge of armoured warfare. Further, it is shown categorically that at the start of the North-West Europe campaign there was a confluence of

conflicting battle ideas. Under Montgomery's leadership and management, the command hierarchy functioned to produce new lessons more appropriate to North-West Europe. Thus, as the central parts of the book have shown this doctrine did not come from the top alone. Operations in the final months of 1944 show a dynamic relationship between problem-solving and the framework within which problems could and should be solved.

Then, the co-creation through reciprocal command relationships, by Montgomery and key members of a small group of 21st Army Group commanders, of doctrine for the final assault on Germany was the main factor which both influenced and helped bring about the outcome whereby all corps commanders and divisional commanders utilised the same methods. The translation of experience into method involved a problemsolving approach within agreed-upon frameworks of common understandings which, once established, then became non-negotiable. In his pamphlets, Montgomery identified the problems of fighting with the tools at his disposal – infantry and tank divisions, artillery and supporting air power – and indicated how he believed they should be tackled in the remainder of the war against Germany. It was Montgomery's adoption of a problem-solving approach – which he adopted in response to the problems of fighting in Normandy and through the Low Countries – in which he emphasised the importance of context but also, importantly, allowed for the diverse views of other commanders to be managed, which led to success in North-West Europe. In sum, Montgomery did not tell commanders how to fight; he told them how to think, so that they could decide how to fight – and thus, the Pamphlets also reflect reciprocal command 'in action'.

The figure below shows a diagrammatic overview of this process. Montgomery defined the outer dynamic loop: that is keeping the Initiative for mobile warfare against the enemy. The other "Principles of War" provide the guiding lines along which this process developed, with 'war fighting principles' such as command and control linking each and linking to the actual process of fighting. Importantly, in this central dynamic loop was the ever-changing situation on the ground where the commander needed to exercise his initiative to constantly out think the enemy. The 'bubble up' link which fed ideas for what worked up to Montgomery was in evidence and in

use from at least mid-Normandy through to the production of the Pamphlets, at which point this link ceased, giving the apparent look of a top-down, authoritarian process.

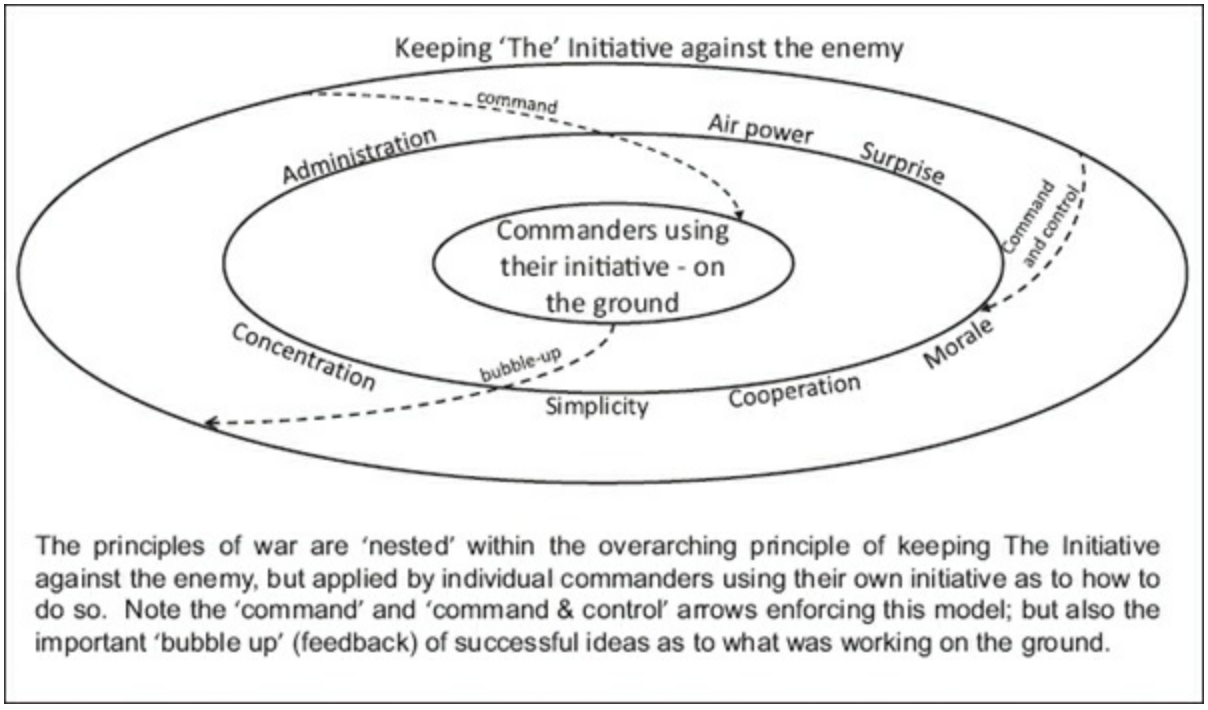
Keeping 'The' Initiative against the enemy
command
Administration
Air power
Surprise
Command and control
Commanders using their initiative - on the ground
Concentration
bubble-up
Simplicity
Cooperation
Morale
The principles of war are 'nested' within the overarching principle of keeping The Initiative against the enemy, but applied by individual commanders using their own initiative as to how to do so. Note the 'command' and 'command & control' arrows enforcing this model; but also the important 'bubble up' (feedback) of successful ideas as to what was working on the ground.

Figure 3 Diagrammatic representation of Montgomery's working command structure

The work upon which this book is based set out to investigate the factors that produced a functional doctrine for armour, infantry, artillery and air power and did just what was necessary to bring them 'up to scratch': these factors were identified as: Montgomery; key commanders; and 'circumstances' – what they were and how they changed from situation to situation. The situation changes from: Normandy (*bocage*); 'late Normandy', Belgium/Holland; 'into Germany' and 21st Army Group's final advance to the Baltic and the Elbe. Also changing the circumstances was the Germans' fighting capacity and methods, and the kind of problems they presented, including different German tank types. The type of fighting could vary tremendously. The German armoured defence in depth which also attempted to use armoured manoeuvre to restore ruptured fronts in Normandy gave way after an advance at great speed to the linear-type anti-tank defences of the Siegfried Line which formed Germany's western border defences. Finally, there was fighting where there was little or no front at all, but small groups of

the German armed forces fighting determinedly with traditional heavy weapons, or new-technology hollow-charge ones.

We now know that there had been a significant amount of more informal communication between Montgomery and subordinate commanders than previously identified. His desired output, that is a common doctrine, and also the desired outcome which was success at the campaign level, were to be the result of the interaction and interrelationship of a variety of processes that were at work during the campaign, which have been identified. Overcoming having to use inferior equipment (in some cases) can fairly be held to be a demonstration of the collective skill of many British commanders. Montgomery managed this output of 'bubble up' and created commonality, managing different groups of people at differing levels in the chain of command. Montgomery was thinking about how to supervise and guide people to try and ensure that correct lessons were learned as quickly, as well and as widely as possible. He was looking for ways in which what he regarded as really important lessons could be adapted to new experience.

9.2 The process which gave rise to Monty's functional doctrine: how it was innovative

This section allows us to start to draw together the strands and findings concerning the ways in which the translation of experience into method was innovative. As the prime instigator of the process, Montgomery worked with others in ways that can now be fully appreciated. However, this finding does not indicate what might be called a 'Round Table': there is no evidence to suggest that this group of effervescent individuals engaged with each other – certainly at the higher levels – except through Montgomery and his agents in this process, such as Lyne. Consequently, it appears reasonable to argue that the effect in the formulation of a functional doctrine was that at the end of 1944 Montgomery was more open than has often been supposed to the bubbling up of new ideas that worked which originated at, or below the divisional level. His main contribution in terms of ideas was to be so quickly responsive to circumstances as to influence a change of circumstance. The new way that emerged after Arnhem, was composed by people on the spot,

including Montgomery but all working under Montgomery's direction in new ways with more direct (though heavily informal) communication than has hitherto been recognised between Montgomery and corps, divisions, and brigades. The 'implementer/innovator' model is a useful and hopefully striking one in terms of its power to explain the 'Middle Management' concepts used: Instigators and Drivers of Innovation; Implementers; and Blockers. Montgomery used individuals such as Lyne as a conduit to allow bubble up, even if there was little communication directly back from Montgomery (on these matters) to divisional level or below. Thereafter, that is from late 1944, this complex approach which included both formal and informal elements was the basis on which Montgomery was content to leave things to the initiative of subordinate commanders.

Thus, it was Montgomery's adoption of a problem-solving approach in a way which emphasised the importance of the relationship between circumstances obtaining in a given situation and the goals of the master plan ('context') which led to success. Subsequently, and after the sidelining of 'blockers', the remaining commanders were all innovators at different times and in their own different ways, thereby providing the means to overcome the problems of command, doctrine and organisation which had already been highlighted as they struggled to adjust ideas on armoured warfare (including those of the War Office) to current circumstances. In the case of Montgomery, he also had to reconcile these reactions and responses with his general theories.

Montgomery's approach to war was a traditional British one in recognising the importance of principles, and issues related to the experience of the First World War such as firepower, administration, and so on. It was not the extent, but rather the depth of his innovations that is their particularly defining feature. The way these elements joined together called for a new orientation. What the War Office offered through its training and publications was textbook knowledge, supplemented by concrete examples from military history: the whole point of this exercise being to teach commanders how to fight battles. There are no examples in Montgomery's pamphlets except for some references to current experience. What this says is that he wanted to facilitate what we would now call 'outside the box' thinking, unconstrained

by unhelpful examples from past successes. Thus, what Montgomery wanted the pamphlets to do was to inculcate an understanding of how to think: he did want to constrain the options that armour and infantry commanders came up with to solutions that delivered certain ends in terms of the big picture in 1945, one of which was speed in mobile war. However, he got people in the two arms at different levels to work in new ways under his direction. Because of the lessons learned, the new doctrine that was institutionalised was intrinsically able to cope with a different type of warfare and thus was successful. The orientation of ‘quick thinking’ within the goals of the master plan was by then the solution rather than any alteration of the master plan.

Montgomery institutionalised emergent organisational change. He changed the way the armoured arm functioned in terms of the requirements of fluidity of major formations and ubiquity of armoured formations. This was a new framework for action which at the most basic level gave rise to standard operating procedures. However, the core value became the ‘Initiative/initiative’ for the reasons given. By late 1944, ‘the Initiative’ had become one of Montgomery’s principles of war. By the end of the war, 21st Army Group was also capable of considerable flexibility on the battlefield with respect to cooperation between armour and infantry, thus it was also capable of ‘initiative’. The key thing about Montgomery and innovation is that he moved from dogma towards being a ‘reflexive’ commander by taking on board others’ experience, but also responding to the unfolding situation and encouraging other commanders to do the same. The process henceforth became command plus co-creation, within a framework of common understandings.

Montgomery had always sorted and sifted his commanders, but now he sorted and sifted them in terms of who could tell him what worked, and who were skilled at using available equipment to best effect. His active contribution was to impose the idea that, although a functional doctrine for armour, infantry, and associated instruments would have a number of different practice aspects which related to the capabilities of the various arms in terms of their contributions of different types of firepower and mobility, there should be a unity of purpose. Multiple types of organisation mean multiple changes, but converging towards a single ‘mean’. It improved the

fighting chances of 21st Army Group in ways that had not been tried before in terms of a functional doctrine which covered armour, infantry, artillery and air power.

Montgomery's solution in practice was to adapt tactics as if the 'capital tank' existed. This is where his insistence on the need for the change in thinking styles came from. Montgomery optimised all those factors he could optimise. Hence his transposition of the term 'ubiquity' from the traditional infantry role, and the use he made of it as a concept: by which he meant 'not tied to one role or the other'. Thus, Montgomery's was a holistic, integrated approach to the use of armoured divisions. However, the importance of the artillery and its role in assisting the other arms to achieve a breakthrough was affirmed as an important characteristic of 21st Army Group's way of fighting.

The problem remained, however, as to just how local success on the battlefield could be turned into a driver for or coordinated with success at campaign level. Montgomery's first step in this process was to make sure that there was a uniform understanding among commanders regarding decision making and outcomes in the context of his aims and intentions.

The manner in which the armour and infantry of armoured divisions could be used to best effect was perceived as the mutual defence of each by the other in offensive tactical groupings of armoured regiments and infantry battalions. This was the solution to the problem of how the process of defending against enemy tanks and anti-tank guns could be made dynamic so that defence itself became mobile rather than static for armoured divisions. Thus, the unity of purpose that underpinned new best practice emphasised not only fluidity of major formations (which pointed in the direction of modern 'battlegroups'), but also offensiveness. Defence too moved – or needed to move – at the speed of the attack, and any apparently static defence was purely temporary and transitory. The role of tank brigades had long been bound up with what had been traditionally understood to be a distinct phase of operations, which ended with the infantry established on their objectives. Barker's promotion, subsequent to the success of Clarkeforce, by 49th Division supported by the tanks of 34th Tank Brigade, signalled the ongoing commitment to the battle that was now expected of the tank brigades as well.

For all senior officers, and the commanders of every type of armoured formation, this had considerable implications for speed of thought and action within operations and the sequencing between phases of operations.

Montgomery ruthlessly removed from command those officers he thought were likely to be in disagreement as he sought to impose a mould of consensus. He intervened to stress and institutionalise the importance of connexions between ‘output’ at the different levels of command and his aim at the ‘operational’ level and common understandings of same. In sum, Montgomery institutionalised doctrine.

Thereafter, he was content to leave things to the initiative of subordinate commanders. Therefore, superficially, what Montgomery was doing and the way the command structure worked would appear to be quite similar, and thus compatible with existing culture and the norms and practices of the Army. However, it was underpinned by different understandings. Commanders working with Montgomery needed to think at two levels: the tactical – their problems, and the offensive use of the armour, infantry, and associated instruments at their disposal to solve them; but also at the strategic – how their problems and solutions fitted into Montgomery’s aim and intention to gain and hold the Initiative. Further, Montgomery wanted all commanders to think like two types of commander, like an armoured and like an infantry commander. Montgomery was after what can be called ‘initiative-within-the Initiative’: he wanted to gain and hold ‘the Initiative’, and required individuals to use their initiative, which would relate output to outcome in the way that he wanted, as expressed generally in the relationship of his principles of war and his war-fighting principles. These, when joined together, facilitated the capacity for success in war, as expressed in his pamphlets. The final doctrine was appropriate and because of the initial innovation there was no further need to innovate. The British Army successfully responded to each new set of challenges within the demands of the high-intensity warfare which characterised the campaign.

That 21st Army Group performed as well as it did in North-West Europe was due not only to the individual adaptability of various commanders at different levels, or simply to material advantages; it was due also to its collective and reciprocal ability under Montgomery’s direction to

institutionalise changes in thinking styles to accommodate changing styles of warfare. Montgomery sought to bring about orientational change among those he could communicate with or to directly with the aim of bringing about organisational change on as wide a level as possible. The fighting chances of armour and infantry which led assaults, on the ground were improved through the introduction of fluidity of major formations. This emphasised the idea of armour's flexibility of role, but also that infantry had a protective role vis-à-vis armour. Commanders were encouraged to change their thinking styles so to incorporate elements of each arm's individualised tactical thinking styles within a common framework. This was a 'combat multiplier' or battle-winning factor. This included quick thinking and fast action, but not flexible tactical command as in the panzer divisions. Indeed, it can be argued that given the circumstances that prevailed, 21st Army Group not only performed well but performed as well as they could have done. In effect, Montgomery optimised all those factors which he could optimise. While this became synonymous with truly massive levels of artillery firepower, fire support from the air, and meticulous logistical preparations, it was not the whole story. The two arms would have one combat mission. Montgomery brought this about through both command changes and the institutionalisation of a common doctrine.

The effectiveness of the response was that the two arms, armour and infantry, were shaped to become a combined arms force, within an all arms team that also included the artillery. However, arising from the fact that any initial fire plan for a breakthrough is almost entirely indirect fire, a number of things were understood from experience from early Normandy. First, it was understood that complete dependence on artillery fire support, to be effective, called for fast forward movement if troops were to reach their objectives before the effects of covering fire had worn off. This frequently presented armoured commanders with the dilemma of whether to stay with the infantry or go on close to the barrage. Secondly, it was understood that enemy anti-tank guns and tanks beyond the range of artillery support, supporting the enemy from flank and rear, were not always destroyed, leaving tanks accompanying the infantry vulnerable, and making it difficult to convert a break-in into a break-out.

Formations which arrived in theatre after the Normandy campaign at first attempted to operate on the basis of textbook artillery-based tactics, but initially without the speed of thought and action necessary to overcome the 'last 200 yards' problem, when artillery could not be used. Further, however, the response in theatre in later Normandy and into the Low Countries of massed remote artillery fire support was being adapted to localised available all arms firepower. The new roles for tanks and other armoured fighting vehicles as recorded by Montgomery in *The Armoured Division in Battle* allowed 21st Army Group to do this. Problems, especially in 1945, were the dispersed nature of the enemy and the fluid nature of operations. This did not supersede the standing arrangements whereby the fire of an infantry division's three affiliated Field Artillery Regiments could if necessary be switched onto supporting one brigade, or heavier fire from further back called down on a target. It did not therefore set aside the important role of the artillery as an arm. It did, however, address the situation that armour was not integral to infantry divisions and brigades, and that tanks and infantry had not been integrated in armoured divisions – British armour had not been used to working together with infantry in any intimate way. And so Montgomery recognised that there could be situations where infantry and armour could fight their way forward together without the need to wait for artillery or air support (air support being an independent variable). This would contribute to his gaining, holding and retaining the Initiative. This called for commanders on the spot to exercise their initiative to be proactive to bring his plans to a successful conclusion and to fight their way forward in this manner.

9.3 A different explanation

Historians today seek to provide comprehensive and satisfying explanations of British operational and tactical failure and success in North-West Europe. In order to provide such explanations, questions have been raised by a significant number of important contemporary historians about whether or not the development of the capacity to integrate combat arms in 21st Army group had any basis in a common doctrine; how such doctrine may have been created; and how Montgomery commanded, that is, whether doctrine was

imposed or generated. Certainly, initial shortcomings in the operational methods in 21st Army Group, and their impact on the effectiveness of armoured forces, would have mattered less if understood more and always incorporated into planning by all senior commanders employing armoured forces. This was offset by the fact that commanders at lower level had developed workable armour-infantry cooperation tactics, as this book shows, before the middle point of the campaign. Therefore, what some have argued was a weakness in the Army's approach to doctrine – that is indiscipline – was to prove a considerable advantage for the armoured units as they attempted to grapple with the operational difficulties thrust upon them by the Normandy campaign. While true, the fighting in Normandy was only one phase of the North-West Europe campaign. Thus, it would be more accurate to say this was the approach at that time, but that this process was not an open-ended one in terms of the progress of the campaign over time. As the lessons of Normandy were disseminated and institutionalised, they became the basis or core of a new 21st Army Group 'official' doctrine or orthodoxy from which no repetition of the earlier permissiveness would be allowed or tolerated, because it was not needed.

What is argued in this book is that Montgomery recognised that finding ways to get people to depart from their rigorous training and buy into his conceptions – particularly at the interface of thinking and execution – was very important. Also important was the challenge of finding really suitable subordinates who were not only specialists having an armour background or a knowledge of the use of armour, but who also saw completely eye-to-eye with him on the handling of armour and equally possessed the necessary forceful decisive leadership. This recognition by Montgomery led to the production and circulation within 21st Army Group of the instructional pamphlets, *The Conduct of War and the Infantry Division in Battle* and, *The Armoured Division in Battle* in late 1944.

Montgomery was asking a lot from his subordinate commanders, yes, but it is important to understand also what he was prepared to settle for if he thought they were on the right wavelength and going in the right direction, as is shown by the example of Carver. There was another management process working here, or rather the two processes working together. Commanders,

however senior, who could or would not practice Montgomery's methods as he promulgated them, found their services dispensed with regardless of their other competence or generalship. This is the significance, for example, of O'Connor's removal from VIII Corps and can also be seen in the examples of Bucknall, Erskine and Hinde.

There were differences of approach that affected the practice of armour-infantry cooperation differently during and subsequent to the Battle of Normandy. There was the unofficial process in which subordinate commanders were challenging, criticizing and changing doctrine in response to the problems of fighting in Normandy on the basis of their practical experiences. Montgomery, often through intermediaries he appointed and attached to Tac HQ to assist him in the production of his pamphlets, such as Lyne, made himself personally au fait with these challenges and criticisms. Then, there was the official process within 21st Army Group in which Montgomery pulled all of these ideas together, stressing the importance of connections between 'output' at the different levels of command, his aim at the 'operational' level and the need for a general understanding of the latter. This was what went out published over his name in the pamphlets. Thus, Montgomery's pamphlets were a synergistic as well as an individualistic product and they were also congruent with commanders' experiences of fighting on the ground. By late 1944, Montgomery and 21st Army Group had developed its operational methods in a way that was both coherent, broadly generic in terms of the problems of fighting the campaign in North-West Europe, and successful. By 1945 lessons were no longer being learned, but the learning that had been acquired was most certainly being implemented, even though a different solution was now required to respond to unfolding circumstances.

This book has shown that Montgomery moved from dogma towards being a 'reflexive' commander by taking on board others' experience, but that he also responded to the unfolding situation, encouraging other commanders to do the same. It has also attempted to resolve the apparently irresolvable issue of the relationship between the authoritarian command style of Montgomery and the doctrinal indiscipline which existed at the start of the Normandy campaign.

It is undoubted that the process of resolving this issue is complex: the result of the process is that 21st Army Group fought operations and actions determined by doctrine. From ‘others’ or below there was an unofficial process whereby armoured warfare doctrine was being challenged, criticised and changed. Then, from Montgomery, there came an official process of dynamic leadership which pulled it all together by institutionalizing doctrine and inculcating a unified mindset. The characteristic of this mindset was a style of what can be called straight thinking, or as Lyne identified it, clear and logical thinking, a quick grasp of essentials and discard of all unnecessary detail. The institutionalisation of doctrine resulted first in the production of a set of ideas; secondly, in a style and speed of thinking applied to the application of those ideas, and finally, the willingness of individual commanders to use their initiative to solve the challenges within the constraints imposed by Montgomery.

Thus, this book has put forward a new interpretation of how 21st Army Group produced a functional doctrine for armour, infantry, artillery and air power by late 1944, and implemented this in early 1945. It shows that investigating the subject of armour-infantry unit organisation and structure in 21st Army Group in North-West Europe 1944-1945, has to begin before 1939 with the development of British doctrine, problems and thought with respect to armoured warfare from the late 1930s as well as with the experiences of fighting earlier in the War – mainly in North Africa, Italy, and then in the initial days and weeks of the Normandy campaign.

Then, in North-West Europe, 21st Army Group moved from a situation of doctrinal anarchy to one of doctrinal uniformity – importantly the book demonstrates how it did this under Montgomery’s leadership. The doctrine of late 1944 reflected the lessons of the previous six months’ fighting but then projected them into 1945 as the means to overcome the problems that were then becoming evident. Instead of looking at whether Montgomery imposed a doctrine from the top or whether the doctrinal situation was one of apparent anarchy, it is suggested that a group of ‘effervescent’ commanders interrelated – under Montgomery’s leadership and management – to formulate a functional doctrine.

Appendix I

Situating this Book within the Literature

The ability of 21st Army Group to integrate its combat arms has not yet been fully explored and satisfactorily explained. In particular, this is true with respect to its ability to reach a common understanding of how the traditionally understood role of armoured divisions was to be unified with the traditional infantry tank role. The former's role was principally to provide for fast moving exploitation after a breakthrough, while the latter's was to support the infantry in breaking into and consolidation. The new unified role was that armour should be equally capable of performing both or either roles. See my article elsewhere, 'Field Marshal Montgomery's Role in the Creation of the British 21st Army Group's Combined Arms Doctrine for the Final Assault on Germany', *The Journal of Military History* 78 (October 2014): 1295-1320), where I have advanced this argument, an argument I seek to expand in this book: this book examines and analyses in more depth the factors that produced a functional doctrine for armour, infantry, artillery and air power and did just what was necessary to bring them 'up to scratch'. Thus, it is concerned with armour-infantry organisation and structure in the British Army in the Second World War, in particular with regard to Bernard Law Montgomery's 21st Army Group in North-West Europe, 1944-45. It is, however, specifically concerned with the British contribution to this Anglo-Canadian army group.

The traditional British understanding of the roles of both arms of British armoured warfare – the independent tank and armoured brigades which had the role of close infantry support, and the armoured divisions which were intended by the War Office to incorporate a more mobile role – needed to be

reconciled with the requirements of the changing operating environments of North-West Europe. Views of Montgomery's leadership and command range between two apparently opposed views which have emerged: one that he was an authoritarian top-down leader and commander who imposed his views, and the second that the British Army in Normandy under his command suffered from, or some would say revelled in and benefited from, doctrinal indiscipline. This book has addressed the issue of how and when 21st Army Group moved from doctrinal 'anarchy' to problem solving under Montgomery's direction, and who else was involved in the process.

Thus, it has examined operational development, innovation and command-and-control in this army group in order to explore how units and formations actually worked to solve tactical problems on the ground. At issue are the development of ideas among Montgomery and his subordinates at a high level in 21st Army Group about how the problems of fighting with armour and infantry should be tackled and the practice of combining or integrating armour and infantry by 'their' army group. These then translate back down into lower-level commanders' decisions on when, where and how to fight with infantry and armour at the divisional and brigade levels. Thus the book investigates how a group of 'effervescent' commanders interrelated, and what the effect of those interrelationships was in the formulation of a workable doctrine.

The corps commanders, armoured division commanders, commanders of independent armoured and tank brigades and infantry division commanders who, in addition to Montgomery, are important enough to make them key members of a small group of commanders for the purposes of this study include: Major-General A.H.S. Adair, Guards Armoured Division; Lieutenant-General E.H. Barker, 49th Infantry Division and later VIII Corps; Lieutenant-General G.C. Bucknall, XXX Corps to August 1944; Brigadier R.M.P. Carver, 4th Armoured Brigade; Brigadier W.S. Clarke, 34th Armoured Brigade; Major-General G.W.E.J. Erskine, 7th Armoured Division; Brigadier W.D.C. Greenacre, 6th Guards Tank Brigade; Major-General E. Hakewill-Smith, 52nd Infantry Division; Brigadier the Hon. W.R.N. Hinde, 22nd Armoured Brigade; Lieutenant-Colonel/acting Brigadier P(atrick) R. C. Hobart, Guards Armoured Division, 7th Armoured Division;

Major-General L.O. Lyne, 50th Infantry Division, then 59th Infantry Division and later 7th Armoured Division; Lieutenant-General Sir R.N. O'Connor, VIII Corps to December 1944; Major-General T.G. Rennie, 3rd Infantry Division and later 51st Infantry Division; Major-General G.P.B. Roberts, 11th Armoured Division; Major-General G.L. Verney, 6th Guards Tank Brigade and later 7th Armoured Division; Major-General L.G. Whistler, 3rd Infantry Division; and Brigadier A.D.R. Wingfield, 34th Tank Brigade, acting CO 8th Armoured Brigade, and 22nd Armoured Brigade.

It should be noted that this book is specifically concerned with the contribution of the British Army (i.e. English, Scottish, Welsh and Irish units) to the principally Anglo-Canadian 21st Army Group, which also included 1st Polish Armoured Division. Several of Montgomery's offensives were led, at levels of command which are particularly focused on in this book, by Canadian generals. Canadian forces formed Canadian II Corps, 2nd British Army until late July 1944, when 1st Canadian Army became operational. The GOC Canadian II Corps, Lieutenant-General G.G. Simonds, is an individual of particular importance. However, as this book is not a study of Canadian battle doctrine in Normandy thus Simonds was not added to the list of commanders for study in this book. Similarly, what can rather arbitrarily be defined as Canadian operations are, in general, omitted in terms of analysis or commentary. However, it is necessary to bring in Operation TOTALIZE (7-10 August 1944). TOTALIZE, which although Canadian driven involved British forces (about a third of the force) and saw the introduction of many of the issues previously identified, is examined because of the contribution of this operation in particular to the story of 21st Army Group operational technique.

Although the seventeen individuals focussed upon held twenty senior independent (i.e. Brigade, Divisional or Corps) commands they are actually linked, for example Erskine, Verney and Lyne successively commanded 7th Armoured Division, and Barker replaced O'Connor as GOC VIII Corps. The independent commands of, for example, Clarke (34th Armoured Brigade) parallel Carver's command of 4th Armoured Brigade. To pursue 'bubble up' operational methods it is also necessary to go down to the level of the regimental COs and below where and when appropriate. For example, 7th

Armoured Division can be extended downwards (in terms of rank) to include: Hinde, Wingfield, Hobart, and so on and right down to the level of Major B.E.L. Burton and Captain J.R. Brown, who were, respectively, the second-incommand of an infantry battalion and an artillery Command Post Officer, and who in each case wrote accounts which have been used as primary sources. Many significant papers have been traced and examined for these commanders, including some not explored before by historians. Extending the search to regimental and, or battalion commands helps to complete the picture for an infantry point of view.

Finally, investigating armour-infantry organisation and structure in 21st Army Group in the campaign in Europe and preparation for it has to begin before 1944, around 1937-38, because that is when the first armoured divisions were established and the problems began; and, in order to understand more fully Montgomery and his fellow commanders' decisions regarding integrating armour and infantry, it is necessary to look back to the formation of their ideas.

While the literature on Montgomery, 21st Army Group and the campaign in Europe is extensive, attention has re-focused, or become more sharply focused on doctrine.

Military doctrine is the understanding of the methods of actual fighting accepted at any given time. Doctrine, it has been said, ensures – or should ensure – that 'everyone knows the right thing to do and that they all do the same things in the same circumstances'.[1] Doctrine can thus be considered the 'synapse' connecting the working of strategy across the levels of war. It is intended to be the vital articulation between previous thinking, past experience and the present military problem to be solved. It is, therefore, not fixed or immutable but rather something which can change or move all the time. Output of doctrine – the methods of actual fighting – was continually moving as commanders struggled to adjust doctrine to the correct lessons from operations. The two processes worked together at the operational level. It has become very much an established way of analysing war to divide it into levels, strategy and tactics being the other two. However, they are rather artificial levels. In practice, they bleed into one another. The operational level of war concerns the activities of armies and corps. How a campaign is fought

is determined at this level. It is also an interface which connects individual, tactical battles with overall strategic aim and intentions. Thus, it should be noted that the terms operational and operational command as used here are not specific to corps commanders only but apply also to the commanders of divisions and brigades to the extent that they were 'concerned with the direction of military resources to achieve the objectives of military strategy' at their level.[2]

The literature on Montgomery and 21st Army Group has gone through several phases over time, providing alternative explanations of how he commanded and the doctrinal basis of this Army Group's activities. Initially, the late 1940s saw the publication of a large number of typically uncontroversial British unit and formation histories and personal accounts.[3] Then, several American accounts appeared that focused on the 1944-45 inter-Allied disputes over strategy and command and seemed to threaten the respect on the British side for Montgomery's prowess.[4] For a long time, the 1944-45 disputes between American and British commanders (Eisenhower and Montgomery) would be reprised by many American and British scholars. The publication of the American and British national, official histories, however, saw stakeholders united against the perceived threat of Soviet aggression. In these histories the relative strengths of armies were measured quantitatively. There was little attempt to appraise combat performance for reasons having to do with Cold War ideological imperatives. During the 1950s and 1960s, a school of British historical writing developed that sought, mainly through operational narratives, to refute American criticism of Montgomery and to emphasise the achievements of 21st Army Group in the wider Allied campaign. Narratives including the Official British History, by Ellis, and its forerunner by North, put forward the view that the performance of 21st Army Group gave 'little occasion for adverse criticism'.[5] A study of Montgomery's career stated that: 'Britain was splendidly served by the men Montgomery put in charge of his corps and divisions'.[6] The Official History's narrative had little to say about issues of command and control, or experience, or what had been learned in 21st Army Group since D-Day. Wilmot, however, was more critical of British 'drive'.[7] Thus, there was little attempt at this stage to appraise operational development, or innovation and

command in 21st Army Group objectively.

By the 1980s, a new wave of interpretations began to appear. Historians began, for almost the first time, to go into specifics on the Western Allies' armies' capabilities and performances in the North-West Europe campaign, and at the same time to posit multi-factorial explanations of outcomes. The historiography entered a new phase, one of objective reconsideration, as this new wave of interpretations emerged, for example, the work of Weigley, D'Este, Hastings, Lamb, and Millett and Murray.[8] The centre ground of the earlier debate, that is the disputes over theatre strategy, gave way to new considerations and new questions. For the first time, historians attempted to appraise the British senior command, in most cases coming to rather negative conclusions and disparaging the performance of the British contribution to 21st Army Group.

For Max Hastings, 'the focus of debate about […] disappointments in Normandy should not be upon Montgomery […] but upon the subordinate commanders and formations who fought the battles.'[9] In Normandy, D'Este argued, 'both Montgomery and Dempsey were altogether too considerate in retaining commanders who did not measure up', while 'Montgomery's frequent habit of bypassing Dempsey to give orders directly to his own subordinates also, at times, limited subordinates' freedom to exploit opportunities for a breakthrough and show that they could 'measure up'.[10] Even in his most recent work on the war in Europe, Hastings still argues that the British had only one corps commander – Horrocks – 'who could be considered competent'. At divisional level too, Hastings holds that British general officers did not match those of America or Germany.[11]

Also in the 1970s and 1980s there were the revelations of the secret of 'Ultra' codebreaking.[12] The help which the most senior Allied commanders had known that they were receiving from the code-breakers at Bletchley Park included being able to read certain types of German messages. This revelation contributed to the scrutiny and the revision of the uncritical acclaim which they had previously received. However, whether the fact that commanders could read this intelligence made their day-to-day decision taking substantively easier or more difficult is moot: they certainly had a great deal more information on which to make their decisions. Arguably,

while the information was often useful in major campaign movements this was not always the case later in the campaign in the battle for Germany: for example ‘Ultra provided very little operational intelligence during the Veritable action’ and it helped other levels of command little with the small-unit-type defence with which 21st Army Group had to contend in early 1945.[13]

By the early 1990s, most historians of the campaign accepted that – for reasons that were many and complex, and not always clear – British performance in combat on occasions left much to be desired. Many interpretations focused on combinations of factors which to a greater or lesser degree included an alleged dearth of operational and tactical skills combined with an aversion to risk-taking on the part of British divisional generals compounded, more often than not by Montgomery’s over-control. However, there were counter arguments that represented a challenge to the revisionist paradigm – many from surviving participants.[14] Most, to some degree, held that British quantitative superiority was pitted against German qualitative superiority (particularly in the case of their most modern armour) and that this, and the other factors (including much of the terrain of the Normandy countryside) which contributed to the difficulties of conducting offensive operations, invalidates the criticism levelled against British troops and their commanders.

Historians today seek to provide fuller explanations of British operational and tactical failure and success in North-West Europe, for example Murray and Millett, Stephen Hart, French, Harrison Place, Jarymowycz, Russell Hart, Copp, and Buckley.[15] There has been a swing back to the view that the performance of Montgomery’s army group has been greatly underrated. An important expression of this view is in Copp’s two books on the campaign which, although on the Canadians, have much to say about doctrine, structures and issues relating to the British. In particular, he cites the Simonds operational policy document from February 1944.[16] In the context of the creation of the doctrine the British and Canadians would employ in Normandy, Simonds’s directive is highly informative. Simonds took the best available ‘policy’ and wrote it up, undoubtedly directed at lower level commanders, putting it together with what can be seen as an attempt by the

Canadian commander to relate tactical doctrine and strategic aims and intentions in some determination of 'how we will fight'. If the evidence for the view that the performance of British troops has been greatly underrated is to be definitely established however, Copp concedes that:

> a great deal of work needs to be done [;] we need studies of the British Army at corps, divisional and brigade level so that we have a firm base for addressing questions about leadership, command, combat motivation and combat effectiveness.[17]

The collection in which Copp's chapter is published, however, just focuses on Normandy, which essentially was a period of learning and experimentation with the new methods. It does not – by definition – deal with the later institutionalisation of the lessons learned which happened after Normandy and can be shown to have continued until the end of the war. Questions as to why difficulties such as those experienced in combining combat arms together existed; whether they were solvable, or solved in particular have become major bones of contention. The volume of the historiography relating to Montgomery's ability and authority doctrinally as Commander, 21st Army Group reflects both the scholastic importance and the intensity of the debate about the subject.

Published first-hand accounts by senior commanders who are significant for this book by virtue of the specific contributions they made constitute a higher-level narrative of considerable importance.[18] Although 'lower level' narratives, of which there were many published around 2000 and in immediately subsequent years, can be used as a source of information *inter alia* about what happened on the ground, they can also be used to provide insight into the technical difficulties of conducting operations by those who worked to solve tactical problems at the small unit level.[19] Further, they contribute usefully to the debate not only at the level of detail but also where and when they comment upon the practical implications of command decisions and working practices.

Hart's work stresses the impact that manpower shortages and concerns over troop morale exerted on Montgomery's generalship, and argues that, when these factors are considered, it is clear that he handled 21st Army Group in North-West Europe more effectively than many scholars have

suggested. Hart argues that the generalship of Montgomery's subordinate army and corps commanders was 'highly competent', and that their methods 'mirrored' those of Montgomery.[20] He is at pains to emphasise 'the extent of consensus that existed within 21st Army Group concerning operational techniques'.[21] Hart's more recent work concentrates on Montgomery and his two subordinate Army commanders. He analyses the operational methods used by Montgomery, Lieutenant-General M.C. Dempsey and Lieutenant-General H.D.G. Crerar. He argues that 21st Army Group conducted this campaign more effectively than some scholars had argued previously and that the generalship of Montgomery and his two subordinate army commanders was 'both appropriate and competent'. He points out that:

> This assertion combines two interconnected sub-arguments: first, that Montgomery handled the 21st Army Group more appropriately than some of the existing literature has recognised; and second, that historians can only appreciate fully how the 21st Army Group conducted the campaign by examining its two highest command echelons rather than by focusing solely on Montgomery.[22]

Hart does not, however, provide an integrated operational analysis at the corps and divisional levels, as he recognises.[23] Focussing only at the army commanders and 'operational'/corps commander level (as in the case of Hart) cuts out the lower and middle levels of command, where as this book has shown that it can be demonstrated that thoughts and actions also eventually influenced strategy. While Hart's work, self-evidently attaches little importance to the lower (tactical levels) of command in shaping doctrinal practice, that of Buckley by contrast arguably attributes much: 'the 8th Army's method of integrating tanks and infantry, for example, was soon seen to be unworkable and was quickly replaced by other tactics, often methods developed in Normandy between armour and infantry commanders following experience in battle'.[24]

Buckley challenges the view of Normandy as a failure for British armour. His starting point is that too much previous analysis has assumed failure simply because it did not follow the pattern set by the Germans in 1939-42. Buckley basically accepts the argument that the doctrine inculcated in training in the UK prior to D-Day was sometimes flawed and at times quite damaging. The most notable example of this was the attempt by Montgomery

to impose his view of infantry-tank cooperation tactics upon 21st Army Group following his appointment in 1943.[25] Thus, Montgomery's failure to impose a common interpretation of doctrine would appear to be due in part at least (although there was more to it than this) to the unwillingness of his senior and intermediate commanders to deviate from their rigorous training. Nevertheless, Buckley argues that both independent brigades and divisional brigade groups had developed workable tactics for infantry-armour cooperation by the midpoint of the campaign in Normandy.[26] The British Army's approach was to be 'flexible and non-dogmatic'. Montgomery's attempts to eliminate any potential confusion by having one straightforward doctrine came at the price of inflexibility. However, although Montgomery's 8th Army doctrine did have a deleterious impact, this was less damaging than it might have been because of unit and formation commanders' discretion. Thereafter: 'what some have argued was a weakness in the […] approach to doctrine – indiscipline – was to prove a considerable advantage for the armoured units as they attempted to grapple with the operational difficulties thrust upon them by the Normandy campaign'.[27] Montgomery's failure to impose a top-down dominance created a situation in which everybody was in charge of his own doctrine. However, this was not the case by late 1944.

French and Harrison Place offer apparently contradictory interpretations of how Montgomery commanded and the commonality – or otherwise – of doctrinal practice. French exemplifies further the shift away from defining combat capability solely in terms of available combat power, that is by numbers of units or volumes of equipment, toward a definition which focuses on the complex interaction of conceptual, material, and moral elements. He continues: 'but combat capability not only depends on how these elements interact with each other; it also depends on how together they synergise with enemy forces'.[28] French seeks to provide an explanation of British operational and tactical failure and success against the German Army in the Second World War. His argument may be summarised as follows. In the 1920s and 1930s, the leadership of the British Army's solution to problem of military success at the level of major warfare without the heavy losses sustained in the First World War was a conception of fighting that was technologically progressive and tactically innovative – that is, it embraced

wholly motorised and a limited mechanised mobility and the necessity of combined arms operations. However, the army entered the Second World War with neither the necessary equipment nor an appropriate doctrine to properly implement this vision. Moreover, prevailing culture and attitudes left inculcation of the army's understanding of the methods of fighting and training to achieve a sufficient level of fighting capability to the discretion of unit commanding officers. French asserts the British Army's commitment to 'autocratic, top-down managerial control'. Flowing from this assertion, he is much concerned with formal interactions and institutional relationships and has little to say about the interplay and interrelationships between protagonists at the different levels.

There is wide agreement that the ability to conduct combined arms warfare was vital to success for major armies in the Second World War.[29] Indeed, it has been argued that 'the [British] army's integration of combat arms raises the most serious questions about British operational effectiveness [in the Second World War].[30] French states clearly that the British Army failed to use their tanks 'in co-operation with other arms' and that it was 'not until the middle of the Normandy campaign that the army finally abandoned the last remnants of its pre-war conviction that tanks and infantry within armoured divisions could and should operate separately'.[31] French gives much of the credit for this and other improvements of the army's fighting capability later in the Second World War to Montgomery. Montgomery:

> did not create the army's operational doctrine, but he did insist that formations under his command practised a common interpretation of it. The outcome was that by the second half of the war, the British possessed what was in some respects a military machine capable of considerable flexibility on the battlefield.[32]

Contrarily, Harrison Place, exploring the doctrine and training for attack at the unit, or minor tactical level argues that 'unsteady though progress towards a wellfounded tactical method was before 1944, the process degenerated into a shambles when Montgomery began to throw his weight about 21 Army Group'.[33] While Harrison Place concedes that it would be unfair to blame Montgomery entirely for the tactical errors into which tank-infantry cooperation fell, he argues that Montgomery's intervention to change established practice before D-Day made the situation worse. However, 'the

problem facing 21 Army Group was not merely a matter of bad doctrine; it was also a matter of doctrinal indiscipline […] units and formations pleased themselves when it came to tank-infantry cooperation tactics'.[34]

Buckley seems to be saying that the two opposing interpretations cannot be reconciled, and it might thus be assumed that he has therefore chosen to come at the issue from a new direction. Buckley does, however, represent a helpful jumping off point for this book, in effect coming to some sort of a mid-point position between these two schools of historiography. This helps us to understand and focus on the dimensions of the problem. The weighting that should be given to Montgomery's role remains unclear, however: as does how, when, and to what effect corps, divisions and brigades responded to Montgomery's command system. What is left unresolved by Buckley's contribution, therefore, is what weight to actually give Montgomery in the outcome. Buckley does not tell us about the management process. This book does.

As the lessons of Normandy began to be disseminated within 21st Army Group, Montgomery's pamphlets of late 1944, especially *Some Notes on the Conduct of War and The Infantry Division in Battle* and *The Armoured Division in Battle*, became part of the ongoing process. This process has been extensively examined by historians, yet the importance of Montgomery's pamphlets as a record of this process has often been neglected. It is not to be argued that the pamphlets were driving doctrine; rather they were a documentation of what corps and division commanders were already practicing.

Montgomery's pamphlets appeared on a scene where there were and would continue to be War Office publications in a number of series. Nevertheless, what happened in 21st Army Group in late 1944 and 1945 was that subordinates, now steeped in ideas which Montgomery believed had come to be accepted as the right ones, adopted 'his' methods. The first three months of 1945 were then a period of testing and a settling in period; of the new and old offensive techniques, the context or backdrop for which was the advance to the Rhine and preparation for the final assault on Germany. By the time of the assault across the Rhine, at the end of this period, the situation was that all commanders were conducting the campaign in this new way for 21st

Army Group's final advance to the Baltic and the Elbe. The methods of armoured warfare in North Africa had been found not to be applicable in North-West Europe and had been replaced.

Montgomery believed that these new methods should be in commanders' minds as a kind of mental map which actually supplied a very narrow range of options by which commanders could adjust to situations, that is a framework for action which also carried the negative sanction of dismissal if commanders did not attempt to comply with it. Thus, while commanders could and did have an informed pragmatism – indeed were encouraged to use their initiative which would allow commanders precision of thought as to what were the really important factors at any one time, and a general permission to act accordingly – Montgomery felt he had to continue to keep a tight grip on what was going on underneath him in terms of command.

In short, if the questions raised by the literature are consolidated and rephrased to ask: how did Montgomery's process of command function to move from a situation of doctrinal anarchy as identified by Harrison Place (back) to one of doctrinal uniformity, as argued by French; then it may be resolved. We know this doctrinal anarchy ceased to be the case by the mid-point of the Normandy campaign (sic. Buckley). Asking this question in this way, it is anticipated, will resolve the apparently irresolvable issue of the relationship between the authoritarian command style of Montgomery and the doctrinal indiscipline which existed at the start of the Normandy campaign.

Thus, the historiography differs in fundamental and important ways and some important questions are left unanswered. Furthermore, there are a number of dimensions of the problem, particularly at the level of the corps, divisions, tank brigades and independent armoured brigades of 21st Army Group, which have been more fully explored in this book than before. To resolve these debates, or at least to develop them in new ways, required analysis of the strengths and weaknesses of Montgomery's command system, of how corps and divisions responded to it, and of the effectiveness of the weapon they forged and used between them.

The central interpretive proposition of this book is that the apparent problem posed by the historiography has obscured the central question which is how Montgomery's command produced a functional doctrine by late 1944.

What has been lacking, therefore, is a comprehensive and satisfying explanation of how all the various processes worked and interacted and interrelated over time to produce not only the desired output, that is a common doctrine, but also the desired outcome which was success at the campaign level.

A more productive way of understanding what was happening is to see it as a more complex process which accommodated both top-down imposition and apparent weak command and control. Practice changed as the campaign developed and this study will assess the extent to which the commanders of the tank brigades and independent armoured brigades, corps, and divisional commanders were drivers of these changes as part of a wider process under Montgomery's direction. Two propositions are advanced to facilitate deeper analysis of the issues. The first is that there was more direct communication between Montgomery and corps and divisional commanders and brigade commanders concerning operational doctrine, best practice and lessons learned than has hitherto been recognised. This leads directly on to the second, which addresses how that communication happened in practice. This book presents evidence for the 'bubbling up' of operational methods from below the corps and the divisional levels, originating at the brigade level. It has been shown that Montgomery was actually more open to the second dimension – the bubbling up, the internal, the cohort acting, the interactive – than has been previously supposed.

The task of this book thus required both a conventional focus on command and a cross-level study of Montgomery's command as mediated through a small group of commanders. Further, to analyse this question more completely, this book has drawn on evidence from the context of the entire North-West Europe campaign, not just Normandy.

The issue as to whether or not the development of operational fighting capability, and in particular the capacity to conduct combined arms warfare, had any basis in a common doctrine of all arms has divided scholars, but the key to understanding how the outcome developed lies in understanding the ways in which the two processes of fighting and the creation of doctrine interrelated. Alongside this stands the new light this book has thrown on how such doctrine may have been created. A third interrelated contribution is in

answering how Montgomery commanded, and whether, and to what extent, doctrine was imposed or generated. In this way the debate about how Montgomery commanded can be furthered.

There was a set of relationships as well as a development of practice. It was necessary to describe and analyse these, focusing on the qualities and contributions made by individuals and the levels at which they made their contributions. It was then necessary to analyse how, to what degree, and with what consequences those contributions were mediated up through the system and had their effects.

The term armour-infantry cooperation has come to mean for many the tactical level, whereas this book looks at the success of armour-infantry cooperation at this level and relates it to changes in brigade and divisional structures. It is clear from the context of the campaign that the innovation and flexibility of British brigades and divisions must be taken into account in any explanation of that success. To understand how 21st Army Group fought the series of operations and actions which constituted the North-West Europe campaign it is necessary to view them not specifically in terms of tank-infantry cooperation doctrine but in the wider setting of general British military doctrine, problems and thought, as well as of commanders' decisions and of how they used the equipment they had. Thus, it is also necessary to consider how armoured and infantry formations were organised, so that the groupings and structures at the tactical level were correct to facilitate armour-infantry cooperation as traditionally understood and as practised in 21st Army Group prior to late 1944.

It is in the development of British armoured warfare doctrine from the late 1930s as well as the experiences of fighting earlier in the War – mainly in North Africa – that the roots of the underlying understanding of the main protagonists involved in this study were to be found. To produce an understanding of the different types of experience possible, a small group of commanders are classified as being important. These include: those who were successful commanders who had fought in North Africa, but who were bound by the 'lessons' they learned there; commanders who had fought in North Africa but who were not bound by or to the lessons learned from previous victories; and commanders who had not fought in the desert.

The story ends, for the purposes of this book, with the successful implementation of Montgomery and 21st Army Group commanders' apparently 'co-created' armour-infantry doctrine. This then allowed 21st Army Group to progress from the first footstep and tank track on German soil to the Elbe and the Baltic without further reviewing its doctrine for the handling of forces of armour, infantry, artillery and air power in the face of new challenges. This book demonstrates how the interaction of Montgomery, key commanders, and 'circumstances' led to the emergence of a new framework for action through which previous experience could be brought to bear to gain both operational initiative (what Montgomery called 'the Initiative') and tactical initiative whereby commanders could use their initiative to solve problems on the ground.

This book thus attempts to assess how Montgomery's command produced a functional, workable and adaptive doctrine for armour, infantry, artillery and air power by late 1944 by examining and analysing operational development, innovation and command-and-control in 21st Army Group. Operational development, innovation and command in 21st Army Group emerges as a complex phenomenon: driven by a 'bubble-up' process of ideas and, ultimately, a top-down system of management. However, the book presents a picture of a process that was complicated, but also complex, yet ultimately a productive one. The same factors and issues need to be simultaneously understood from different perspectives. No one part should be understood in isolation from the processes surrounding it or indeed from its own position within the continuum of development over time. The book thus contributes holistic understanding of the creation of doctrine to the literature on Montgomery, 21st Army Group and the campaign in Europe.

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